3R-1054

Williams
Lowery Tank Battery

C-141
Subsequent Report

June 2018

Fields, Vanessa, EMNRD

From: Galer, Aaron <Aaron.Galer@Williams.com>
Sent: Monday, June 25, 2018 9:26 AM
To: Fields, Vanessa, EMNRD
Subject: Project Updates

Vanessa,

Per our phone conversation this morning, here are the project updates:

1) Lowery Tank Battery: An application was submitted on 6/18/18 to the NMSLO for the three additional proposed monitoring wells. Approval is expected within the next 2 to 3 weeks.

2) Lateral L-2: A casual use request will be submitted to the BLM today for the additional proposed groundwater monitoring outside the pipeline right-of-way. Approval is expected within the next 4 to 6 weeks.

3) Hargrave: An application was submitted on 3/9/18 to the BLM for the installation of three additional proposed monitoring wells outside the pipeline right-of-way. Approval is expected within the next 2 to 3 weeks.

Let me know if you have any additional questions. Otherwise, I'll keep you updated when progress is made.

Williams

Aaron Galer | Williams | Environmental Specialist IV | Environmental Programs
Office: 801-584-6746 | Cell: 801-244-1219 | 295 Chipeta Way, SLC, UT 84108

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report (Subsequent) ☐ Final Report

Name of Company **Williams Four Corners LLC**	Contact **Aaron Galer**
Address **1755 Arroyo Drive, Bloomfield, NM 87413**	Telephone No. **801-584-6746**
Facility Name **Lowery Tank Battery**	Facility Type **Storage Tank**

Surface Owner **State of New Mexico Lands**	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	**16**	**26N**	**6W**					**Rio Arriba**

Latitude 36.484182 **Longitude** -107.465462

NATURE OF RELEASE

Type of Release **Produced Water**	Volume of Release **Unknown**	Volume Recovered **Unknown**
Source of Release **Below-grade tank**	Date and Hour of Occurrence **03/26/2013; 9:00 AM**	Date and Hour of Discovery **03/26/2013; 9:00 AM**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ **Not Required**	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ **No**	If YES, Volume Impacting the Watercourse.	

NMOCD
MAY 30 2018
DISTRICT III

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* During removal/replacement of a below-grade tank from the location, hydrocarbon impacted soils were encountered. An investigation of the area beneath the below-grade tank was performed to determine the extent of hydrocarbon impacts. In November 2013, approximately 954 cubic yards of TPH and BTEX impacted soil were removed from the area beneath the former BGT.

9/12/2017 Update: Please see the attached Remediation Plan and Conditions of Approval, as requested.
1/23/2018 Update: Please see the attached Remedial Assessment Work Plan.
5/25/2018 Update: Please see the attached Remedial Assessment Report.

Describe Area Affected and Cleanup Action Taken.* The investigation findings are documented in the attached Remedial Assessment Report. Additional actions are proposed as documented in the report. Groundwater impacts have been identified extending beyond the approved investigation area. Williams will submit the necessary access forms to the SLO within 3 days of identifying the approved well locations.

9/12/2017 Update: Please see the attached Remediation Plan and Conditions of Approval, as requested.
1/23/2018 Update: Please see the attached Remedial Assessment Work Plan.
5/25/2018 Update: Please see the attached Remedial Assessment Report.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: **Aaron Galer**	Approved by Environmental Specialist:
Title: **Environmental Specialist**	Approval Date: 7/6/18 Expiration Date:
E-mail Address: **Aaron.Galer@Williams.com**	Conditions of Approval: Attached ☐
Date: **5/25/2018** Phone: **801-584-6746**	

* Attach Additional Sheets If Necessary

NJK1331655885

APTIM
6380 South Fiddlers Green, Suite 310
Greenwood Village, CO 80111
Tel: +1 303 741 7700
Fax: +1 303 741 7479

Remedial Assessment Report

Lowery Tank Battery

Lowery Tank Battery
Rio Arriba County, New Mexico

Project 155624

May 24, 2018

Prepared for:

Williams Four Corners LLC

Prepared by:

APTIM Environmental & Infrastructure, Inc.

6380 South Fiddlers Green, Suite 310
Greenwood Village, CO 80111
United States
www.CBI.com

APTIM

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1.0 INTRODUCTION

1.1 SITE LOCATION

The Williams Field Services LLC (Williams) Lowery Tank Battery site (Site) is located in the northeast quarter of the southeast quarter of Section 16, Township 26 North, and Range 6 West in Rio Arriba County, New Mexico, as depicted on **Figure 1**. The Site currently consists of one 400-barrel (bbl) condensate/produced water tank, one 250-bbl below grade tank (BGT), two polyethylene tanks containing glycol and methanol, and all are located within a lined secondary containment. An investigation was conducted in December 2017 and April 2018 to delineate the extent of impact in the soil and groundwater. The results of these investigations are summarized in this report.

1.2 BACKGROUND

While moving a BGT at the Site in early 2013, Williams observed petroleum hydrocarbon-impacted soil under the tank. The observed impact was believed to be from the historical unlined pit. A limited environmental site investigation and excavation was conducted in March 2013. Initial remediation and delineation activities are detailed in the previously submitted *Limited Site Investigation – Lowery Tank Battery*, dated September 3, 2013 by Southwest Geoscience, and in the *Interim Corrective Action and Supplemental Environmental Site Investigation Report*, dated June 16, 2015 by Apex TITAN.

In December 2017, the State of New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (NMOCD) approved the "Interim Corrective Action and Supplemental Environmental Site Investigation Report" dated June 16, 2015 and authorized Williams to proceed with the proposed delineation activities at the Lowery Tank Battery site in Rio Arriba County, New Mexico. The initial phase of investigation was performed as summarized in the *Subsurface Investigation Report*, dated January 16, 2018, by LE Environmental, Inc. Based on the results of the 2017 assessment, additional investigation actions were performed and are presented in this report.

The primary contaminants of concern (COCs) are benzene; total benzene, toluene, ethylbenzene, xylenes (BTEX); total petroleum hydrocarbons-gasoline range organics (TPH-GRO), TPH-diesel range organics (TPH-DRO); and total petroleum hydrocarbons (TPH).

In response to the detection of the release, Williams initiated assessment activities.

- In 2013, impacted soils were discovered while removing a 250 bbl BGT associated with natural gas gathering;
- In November 2013, approximately 954 cubic yards of TPH and BTEX impacted soil were removed from the area beneath the former BGT. The impacted soil was transported to the Envirotech, Inc. landfill located near Hilltop, New Mexico for final disposition;
- In June 2015, Williams submitted "Interim Corrective Action and Supplemental Environmental Site Investigation Report" to NMOCD which summarized previous activities and outlined plans for assessment and corrective action;

- In August 2017, the NMOCD inquired on the progress of the project. The NMOCD subsequently approved the proposed delineation plan with the stipulation that the work was to be competed in 30 days;
- In December 2017, approval was received from the New Mexico State Land Office to proceed with the NMOCD required soil delineation. The phase II delineation activities were conducted the following week which included the collection of soil samples from borings SB-16 through SB-23. Groundwater was encountered at two of the soil borings, but one of the borings collapsed before a sample could be collected and the second sample collected was damaged in shipment and therefore, there were no groundwater analytical results during this phase.

Based on the December 2017 assessment activities, continued delineation was performed in the spring of 2018. As a result of prior assessment activities, the following key observations were made:

- Elevated concentrations of benzene, total BTEX, TPH-GRO, TPH-DRO and Total TPH exceeding the NMOCD action levels were detected in the soil at and near the former BGT location;
- The extent of hydrocarbons in unsaturated soils is delineated;
- The presence of hydrocarbons in subsurface soil at distances from the source appears indicative of contaminant migration with the presence of groundwater;
- Groundwater was observed generally at depths around 35 to 50 feet bgs;
- The groundwater flow is to the south-southwest at a hydraulic gradient of 0.006;
- The groundwater impact was delineated to the east and west; and,
- The extent of hydrocarbons in groundwater has not been delineated to the south.

1.3 SCOPE OF WORK OBJECTIVES

Based on the NMOCD site ranking of 30, the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total BTEX, and 100 mg/kg for TPH. This investigation scope of work was performed with the following objectives:

- Delineate the horizontal and vertical extent of impacted soils originated from the former 250 bbl BGT;
- Delineate the groundwater contamination; and,
- Collect data to support remedial planning efforts.

2.0 REMEDIAL ASSESSMENT SCOPE

Prior to the assessment, permitting activities were undertaken with the New Mexico State Land Office. As part of this permitting processes, an archaeology survey was completed from which two areas of potential significance were identified (see **Figure 2**). The limits of the assessment were bound by the area permitted with the New Mexico State Land Office.

2.1 SOIL BORINGS

The delineation of hydrocarbons in the soil was completed through the advancement of soil borings, soil sampling, and laboratory analysis. The locations of the soil borings are presented on **Figure 2**. Locations were selected based on the previous soil boring data. Data for soil borings 1 to 15 were collected during the 2013 investigation, 16 to 23 in 2017, and BH01 to BH02 in 2018.

Specifically, the scope of work included:

- Soil borings were installed to an approximate total depth of 50 feet bgs using hollow-stem drilling techniques;
- The soil column from each soil boring was screened for volatile organic compound (VOC) vapors using a photoionization detector (PID) and the lithology logged;
- At each boring location, samples were continuously sampled for logging and field screening purposes. Soil samples from each boring were submitted for laboratory analysis of BTEX analysis using method 8260B and TPH-GRO (C6-C10), TPH-DRO (C10-C20), and total petroleum hydrocarbons-motor oil range (TPH-MRO) (C28-C40) using method 8015.

Soil boring logs for BH01/02 are presented in **Appendix A**.

2.2 MONITORING WELLS

Monitoring wells were installed to evaluate the potential hydrocarbon impact to groundwater and to provide hydrogeological data of the shallow aquifer. The locations of the monitoring wells installed are presented on **Figure 2**.

The depth to groundwater was recorded to determine the direction of groundwater flow and the hydraulic gradient. The depth of the wells was determined by the on-site geologist based on historical data from previous investigations and field observations.

Specifically, the scope of work included:

- Installation of ten groundwater monitoring wells using hollow-stem drilling techniques;
- The total depth of the monitoring wells was generally 50 feet bgs or a minimum of 5 feet below the measured water table;
- Wells were constructed as follows:
    - 2-inch diameter, schedule 40 polyvinyl chloride (PVC) casing,
    - 20 feet of 2-inch diameter, 0.010-inch machine slotted, schedule 40 PVC well screen,
    - 20/40 silica filter sand extending from terminus of the borehole to 2 feet above the top of the well screen,
    - A minimum of 2 feet of bentonite chip annular seal on top of the filter pack,

- The remaining annulus space with was filled with bentonite grout or chips to 1 foot from the surface,
- Installation of either flush-mount or well box surface completion.

- The monitoring wells were developed to improve the hydraulic communication between the well and the surrounding formation; and,
- The wells were surveyed to the site benchmark.

Monitoring well logs are presented in **Appendix A**.

2.3 GROUNDWATER SAMPLING

Groundwater sampling activities were performed immediately following well installation and development as part of the rapid delineation.

Specifically, the groundwater sampling scope of work included:

- Recording the depth to groundwater (and LNAPL if present) in all monitoring wells using an interface probe capable of measuring to 0.01 feet;
- Purging each well of three well volumes; and,
- Collecting groundwater samples and analyzing the samples for BTEX using method 8260B. Due to the immediacy of completing delineation, samples were not collected for attenuation parameters during these site actions.

Samples were maintained under chain-of-custody procedures and delivered to the designated laboratory.

3.0 REMEDIAL ASSESSMENT RESULTS

3.1 SITE GEOLOGY

The Site is located on the north sloping side of Dogie Canyon consisting primarily of unconsolidated silts and sands with a dendritic drainage pattern. The Site lithology consists primarily of alternating layers of dark brown silty sand (SP) and light brown, fine-medium grained sand (SP) through most of the vadose zone. Changing to light to dark gray sandy silt (ML) and fine sand (SP) with partially cemented zone in the capillary fringe and phreatic zone. The formation changes in color to grayish brown, gray, and dark gray with depth particularly in areas impacted by hydrocarbons. Bedrock was not encountered during this investigation.

3.2 HYDROGEOLOGY

Liquid level gauging results for the wells are summarized in **Table 1**. A potentiometric surface map was prepared based upon liquid level measurements collected in April 2018 (**Figure 3**). It should be noted that the gauging was performed immediately after well development and therefore, certain wells may not have had groundwater levels return to static conditions prior to gauging.

In April 2018, the depth to groundwater range from 46.83 (elevation 6398.24) to 56.70 (elevation 6384.64). Groundwater flow was to the south at a hydraulic gradient of 0.006. The hydrocarbon migration in the shallow groundwater suggests that groundwater flow trends to the south-southwest.

3.3 SOIL DELINEATION

PID and laboratory analytical results for the soil samples are summarized in **Table 2** with historical soil analyses. Soil delineation was completed through the advancement of soil borings, soil sampling, and laboratory analysis. The locations of the final borings are presented on **Figure 2**. **Figure 4** presents unsaturated soil data where concentrations were observed above action levels of 50 mg/kg total BTEX and/or 100 mg/kg total petroleum hydrocarbons. Analytical data is presented in **Appendix B**.

Specific observations include:

- **Figure 4** presents analytical results above action levels of 50 mg/kg total BTEX and/or 100 mg/kg total petroleum hydrocarbons in unsaturated soils. The extent of unsaturated soil contamination above action levels appears limited to the area at and near the former BGT;
- At distances away from the BGT, soil concentrations appear representative of the groundwater migration zone, capillary fringe, and potential historic smear zone due to fluctuations in water levels.

3.4 GROUNDWATER DELINEATION

Groundwater delineation was performed through the installation of monitoring wells and sampling of groundwater. Groundwater analytical results are presented in **Table 3**. **Figure 5** is a benzene concentration map.

Specific observations include:

- Groundwater flow is generally to the south, trending to the southwest;
- Elevated benzene concentrations in groundwater are found near the former BGT and distances greater than 500 feet downgradient; and,
- The extent of benzene concentrations has been delineated to the east and west, but not to the south.

4.0 ADDITIONAL DELINEATION AND REMEDIAL TESTING

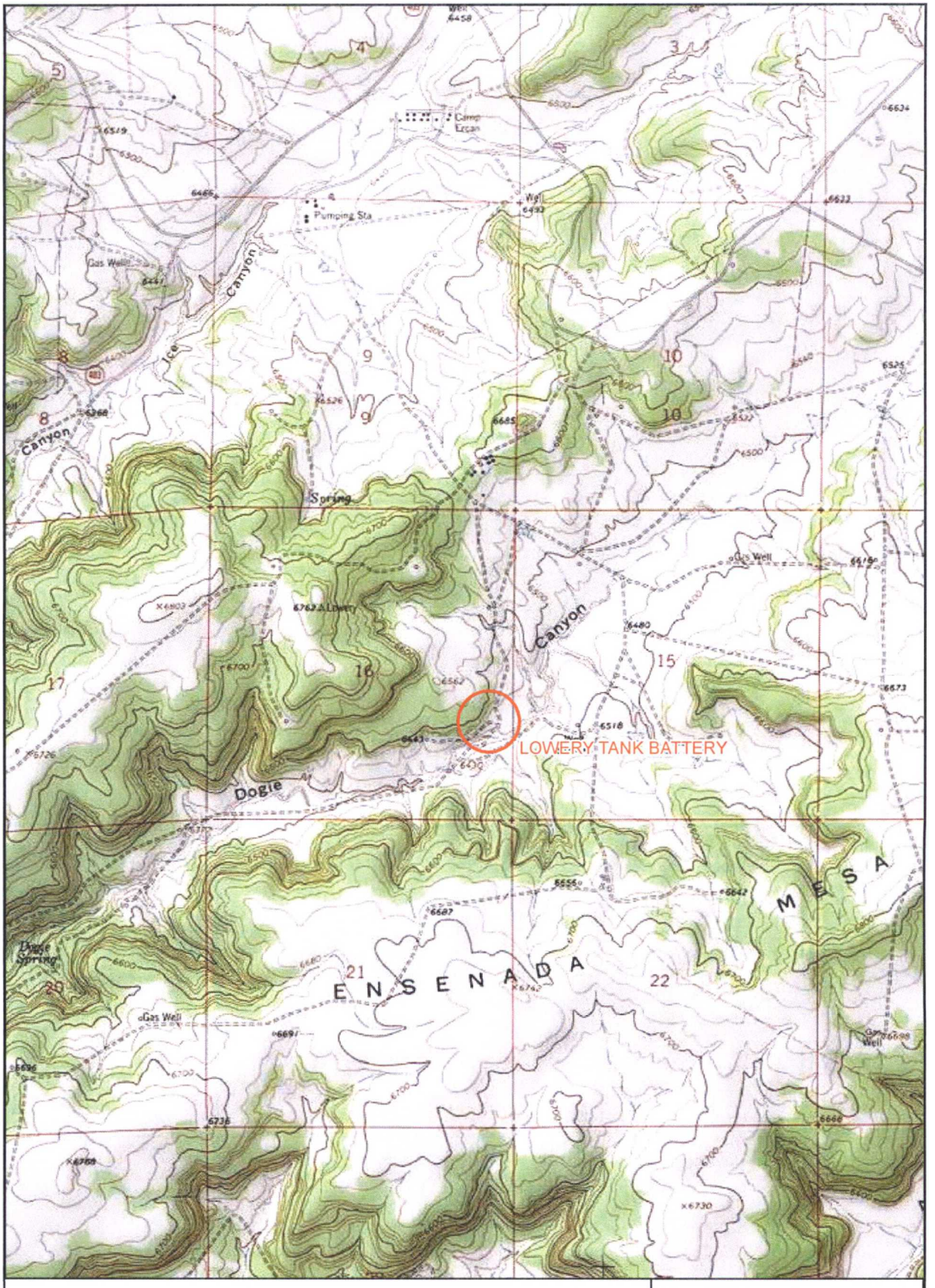
Additional groundwater data collection is required for delineation of the southern end of the plume. **Figure 6** presents the proposed locations of the additional groundwater monitoring wells.

With the additional delineation, certain remedial testing is necessary for the evaluation and design of future remediation actions. Additional remedial testing proposed at this time includes:

- In addition to BTEX and TPH parameters, collect groundwater samples from all monitoring wells for biological process parameters. Parameters to be measured in the field include oxidation-reduction potential (ORP), pH, temperature, conductivity, dissolved oxygen (DO), and ferrous iron. Additional parameters to be included and analyzed by the laboratory include alkalinity, nitrate/nitrite, sulfate, and manganese.
- Performing a vacuum test at MW01 to evaluate the efficacy of vapor extraction in the source area. A minimum of three vacuum monitoring wells will be installed in the impacted interval of the formation to evaluate the effectiveness of this technology.
- Performing hydraulic slug tests at MW01, MW04, and MW09 to determine the hydraulic properties of the aquifer for remedial technology evaluation.

The additional delineation activities will be performed once approval is obtained from the State Land Office. The proposed remedial testing will be completed during the same mobilization with the additional delineation activities.

Figures



Legend

SITE LOCATION

N

0 1,000 2,000 4,000 Feet

Williams Four Corners LLC

SITE LOCATION MAP
LOWERY TANK BATTERY
NESE SEC 16 T26N R6W
RIO ARRIBA COUNTY, NEW MEXICO

Figure 1

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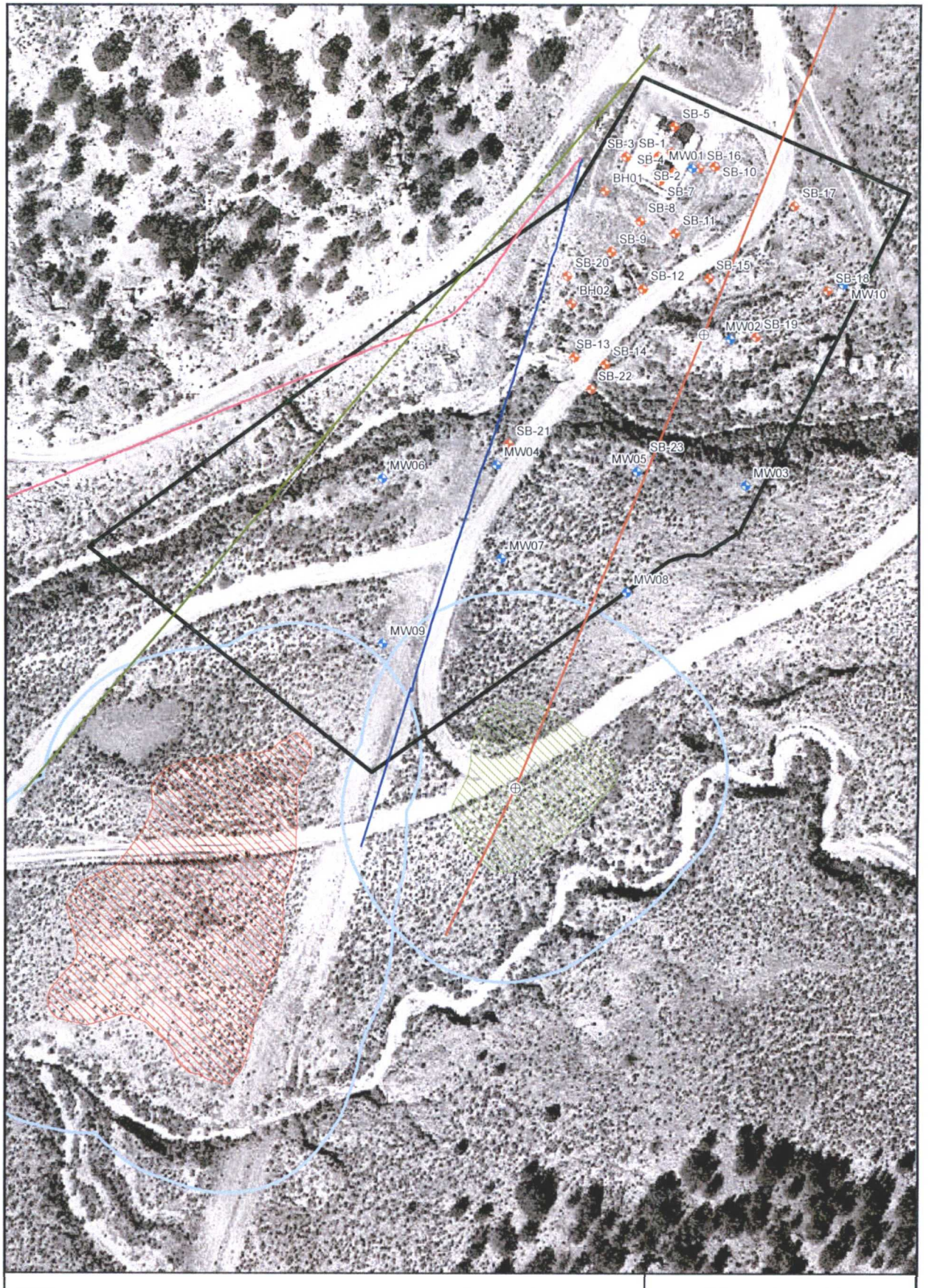
Greenwood Village, CO 80111



Legend

- POWER POLE
- ABOVEGROUND ELECTRIC
- ENTERPRISE LINE
- WFS LINE 1
- WFS LINE 2
- Existing Lease Area
- LA 111103
- 100' ARCHAEOLOGICAL BUFFER
- SEAS 18-022-02
- MONITORING WELL
- SOIL BORING

N

0 50 100 200 Feet

Williams Four Corners LLC

SITE MAP
LOWERY TANK BATTERY
NESE SEC 16 T26N R6W
RIO ARRIBA COUNTY, NEW MEXICO

Figure 2

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Legend

- POWER POLE
- ABOVEGROUND ELECTRIC
- ENTERPRISE LINE
- WFS LINE 1
- WFS LINE 2
- Existing Lease Area
- LA 111103
- 100' ARCHAEOLOGICAL BUFFER
- SEAS 18-022-02
- MONITORING WELL
- GROUNDWATER FLOW LINE
- 6394.34 GROUNDWATER ELEVATION
- * GROUNDWATER ELEVATION NOT REPRESENTATIVE OF STATIC CONDITIONS AND NOT USED FOR CONTOURING

N

0 50 100 200 Feet

Williams Four Corners LLC

GROUNDWATER FLOW - APRIL 2018
LOWERY TANK BATTERY
NESE SEC 16 T26N R6W
RIO ARRIBA COUNTY, NEW MEXICO

Figure 3

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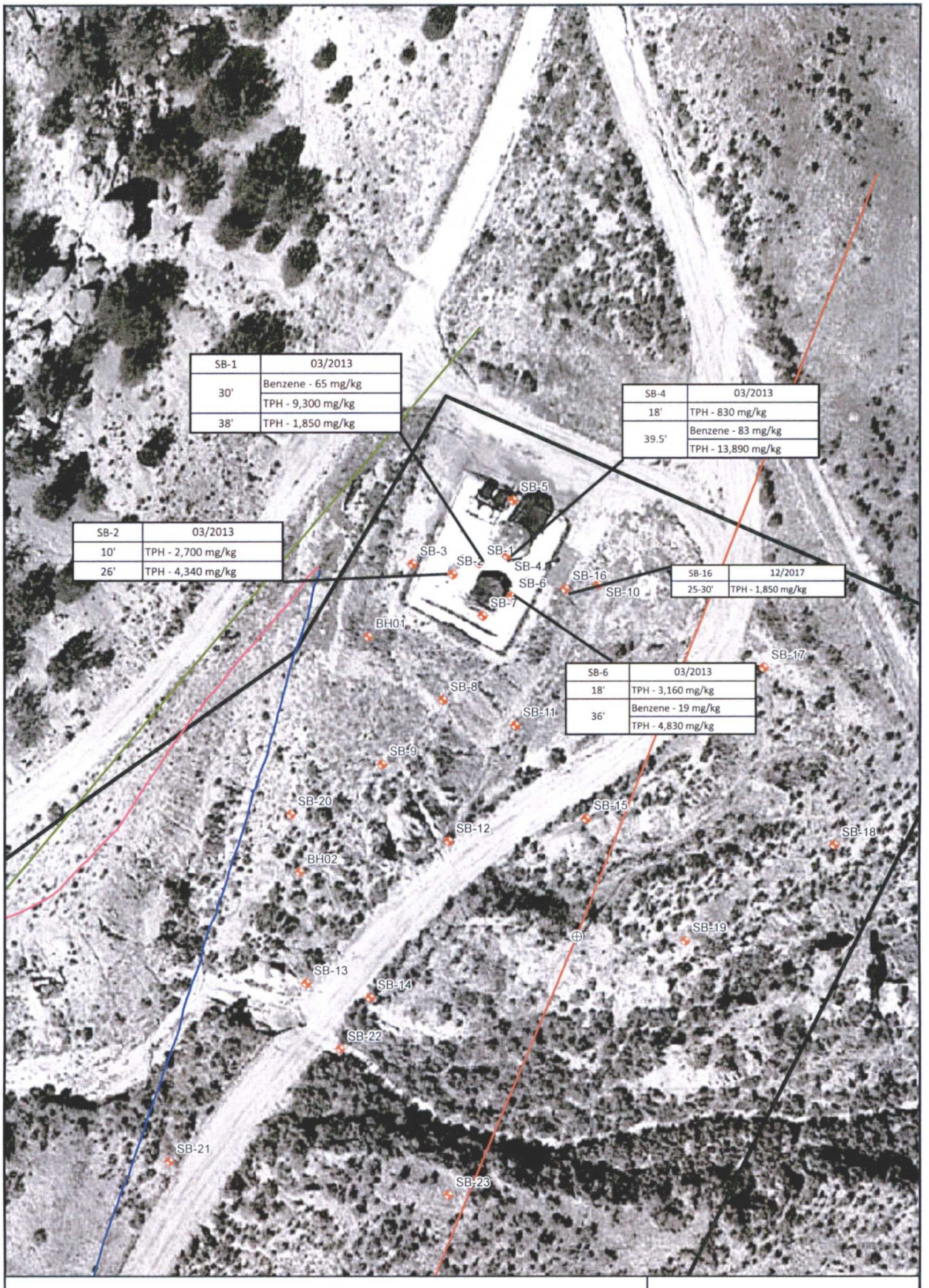

Williams Four Corners LLC

SOIL BORING LOCATIONS
LOWERY TANK BATTERY
NESE SEC 16 T26N R6W
RIO ARRIBA COUNTY, NEW MEXICO

Figure 4

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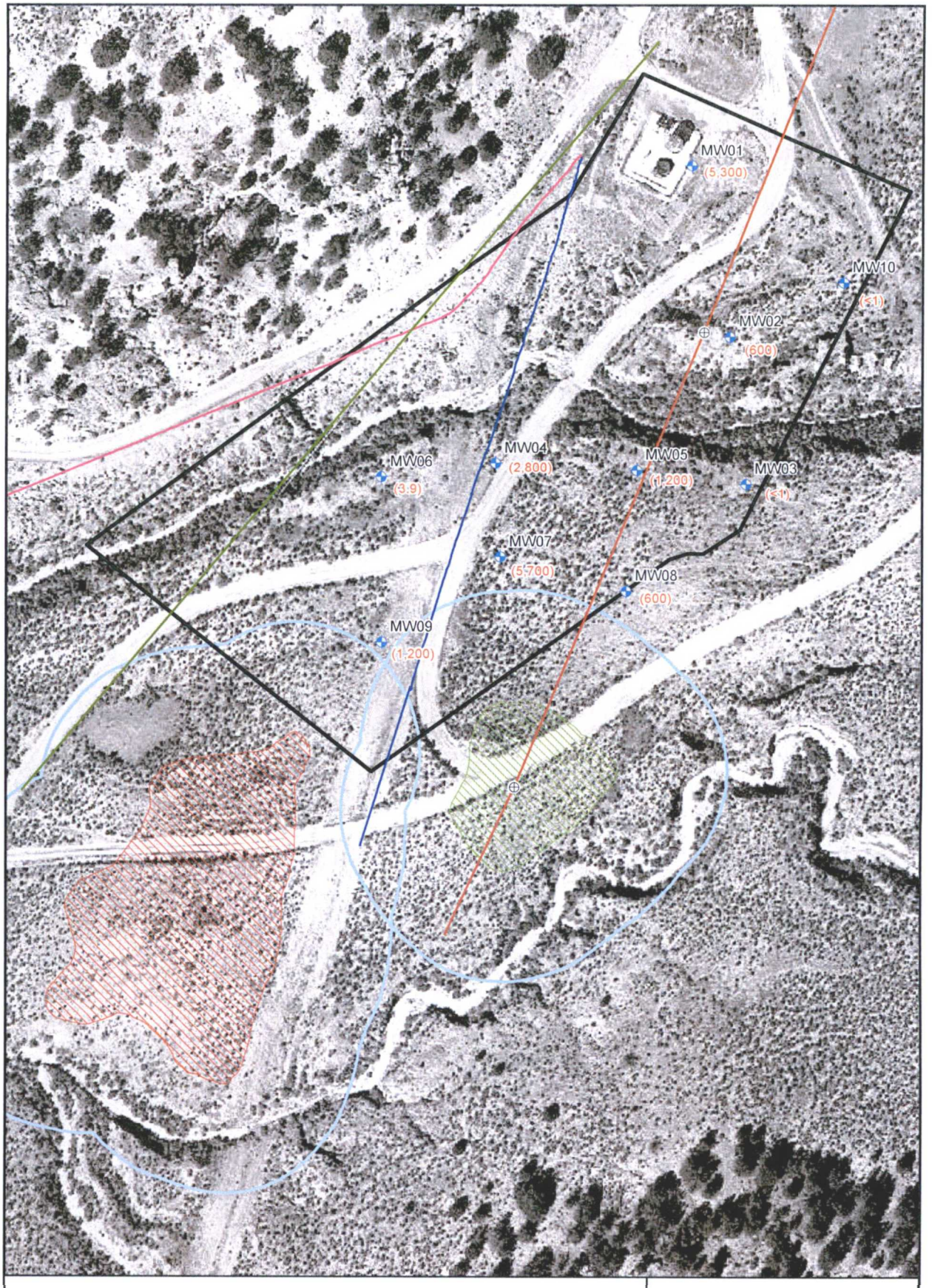

Legend

- POWER POLE
- ABOVEGROUND ELECTRIC
- ENTERPRISE LINE
- WFS LINE 1
- WFS LINE 2
- MONITORING WELL
- Existing Lease Area
- LA 111103
- 100' ARCHAEOLOGICAL BUFFER
- SEAS 18-022-02

(5,300) BENZENE CONCENTRATION (ug/l)

N

50 100 200 Feet

Williams Four Corners LLC

BENZENE IN GROUNDWATER
LOWERY TANK BATTERY
NESE SEC 16 T26N R6W
RIO ARRIBA COUNTY, NEW MEXICO

Figure 5

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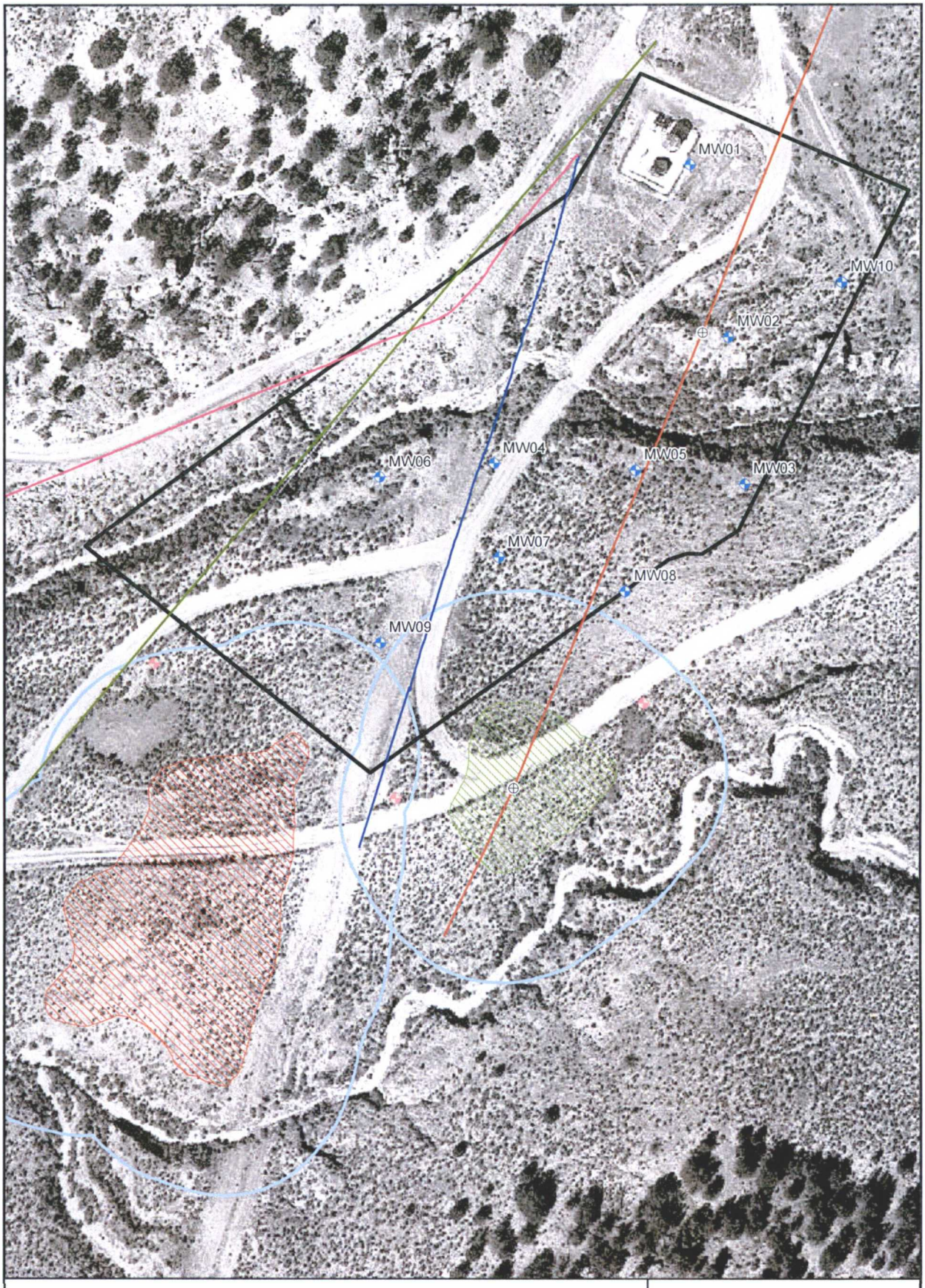

Legend

- POWER POLE
- ABOVEGROUND ELECTRIC
- ENTERPRISE LINE
- WFS LINE 1
- WFS LINE 2
- Existing Lease Area
- LA 111103
- 100' ARCHAEOLOGICAL BUFFER
- SEAS 18-022-02
- MONITORING WELL
- PROPOSED MONITORING WELL

N

0 50 100 200 Feet

Williams Four Corners LLC

PROPOSED MONITORING WELLS
LOWERY TANK BATTERY
NESE SEC 16 T26N R6W
RIO ARRIBA COUNTY, NEW MEXICO

Figure 6

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Tables

Table 1
LOWERY TANK BATTERY
LIQUID LEVEL GAUGING DATA
WILLIAMS FOUR CORNERS, LLC

ID.	LAT	LONG	Total Depth	Top of Casing Elevation	Depth to GW	Depth to Product	Product Thickness	Corrected GW Elevation
				(ft AMSL)	(ft below TOC)	(ft below TOC)	(ft)	(ft AMSL)(1)
					Apr-18			
MW-01	36.4841567	-107.4653257	6385.12	6445.07	46.83			6398.24
MW-01	36.4841567	-107.4653257	6385.12	6445.07	46.88			6398.19
MW-02	36.4837333	-107.4652058	6388.10	6446.52	49.72			6396.80
MW-03	36.4833673	-107.4651518	6394.40	6446.43	50.28			6396.15
MW-04	36.4834180	-107.4659332	6383.46	6436.76	40.42			6396.34
MW-05	36.4834012	-107.4654950	6385.07	6443.95	47.87			6396.08
MW-05	36.4834012	-107.4654950	6385.46	6443.95	48.86			6395.09
MW-06	36.4833855	-107.4662855	6380.54	6441.34	56.70			6384.64
MW-06	36.4833855	-107.4662855	6383.02	6441.34	52.84			6388.50
MW-07	36.4831826	-107.4659171	6384.77	6444.29	48.76			6395.53
MW-07	36.4831826	-107.4659171	6385.10	6444.29	49.19			6395.10
MW-07	36.4831826	-107.4659171	6384.82	6444.29	49.17			6395.12
MW-08	36.4830998	-107.4655286	6391.13	6449.86	54.49			6395.37
MW-09	36.4829553	-107.4662874	6385.37	6443.81	49.47			6394.34
MW-09	36.4829553	-107.4662874	6385.39	6443.81	49.92			6393.89
MW-10	36.4838679	-107.4648573	6395.64	6447.33	50.23			6397.10

Depth to water measured from casing top of monitor well.

NM	Not Measured
ft	feet
TOC	Top of Casing
(1)	0.80 specific gravity used for corrected groundwater elevations

Table 2
LOWERY TANK BATTERY
SOIL ANALYTICAL RESULTS
WILLIAMS FOUR CORNERS LLC

ANALYTICAL PARAMETERS						VOLATILES					TPH				Comments
Sample ID	Latitude	Longitude	Sampling Date	Depth	PID (ppmV)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH Total (mg/kg)	
Action Level						10				50				100	
SB-1	36.484208	-107.465426	3/26/2013	8.0		3.4	180	23	260	466	4,700	520	NA		Soil interval excavated
				30.0		65	330	24	240	659	8,700	600	NA		Unsaturated Soil
				38.0		3.3	39	6	56	104	1,600	250	NA		Saturated Soil / Capillary Fringe
SB-2	36.484195	-107.465466	3/26/2013	10.0		<0.97	9.1	6.9	59	75	1,700	1,000	NA		Soil interval excavated
				26.0		<4.9	100	15	150	265	3,800	540	NA		
SB-3	36.484207	-107.465526	3/26/2013	6.0		<0.047	<0.047	<0.047	<0.094	<0.235	<4.7	<9.9	NA		
				16.0		<0.048	<0.048	<0.048	<0.096	<0.24	<4.8	<9.7	NA		
				28.0		<0.048	<0.048	<0.048	<0.096	<0.24	<4.8	<9.9	NA		
SB-4	36.484217	-107.465385	3/26/2013	18.0		<0.47	1.7	1.5	16	19.2	430	400	NA		Soil interval excavated
				39.5		83	420	37	370	910	13,000	890	NA		Saturated Soil / Capillary Fringe
SB-5	36.484283	-107.465376	3/26/2013	32.0		<0.049	<0.049	<0.049	<0.097	<0.244	<4.9	<9.9	NA		
				36.0		<0.048	<0.048	<0.048	<0.096	<0.24	<4.8	9.8	NA		
SB-6	36.484168	-107.465379	3/26/2013	18.0		<2.4	38	12	130	180	2,500	660	NA		Soil interval excavated
				36.0		19	160	14	160	353	4,300	530	NA		Saturated Soil / Capillary Fringe
SB-7	36.484145	-107.465421	3/27/2013	34.0		<0.048	<0.048	<0.048	<0.097	<0.241	<4.8	<9.7	NA		
				40.0		<0.047	<0.047	<0.047	<0.094	<0.235	<4.7	14	NA		
SB-8	36.484044	-107.46548	3/27/2013	42.0		<0.047	1.0	0.33	3.1	4.4	89	58	NA		Saturated Soil / Capillary Fringe
				44.0		1.0	32	3.8	45	82	800	140	NA		Saturated Soil / Capillary Fringe
SB-9	36.483967	-107.465571	3/27/2013	38.0		<0.046	<0.046	<0.046	<0.093	<0.231	<4.6	<10	NA		
SB-10	36.484182	-107.46525	3/27/2013	36.0		<0.48	4.0	<0.97	8.8	12.8	220	64	NA		Saturated Soil / Capillary Fringe
SB-11	36.484014	-107.465373	3/27/2013	32.0		<0.24	1.1	<0.47	2.9	4.0	82	15	NA		
				36.0		15	93	7.8	80	196	2,600	260	NA		Saturated Soil / Capillary Fringe
SB-12	36.483875	-107.465471	3/10/2014	32.0		13	85	7.3	76	181	2,600	130	NA		Saturated Soil / Capillary Fringe
SB-13	36.483705	-107.465683	3/10/2014	20.0		<0.049	<0.049	<0.049	<0.098	<0.245	<4.9	<9.9	NA		
SB-14	36.483687	-107.465589	3/10/2014	34.0		11	57	5.1	51	124	1,900	210	NA		Saturated Soil / Capillary Fringe
				44.0		<0.047	<0.047	<0.047	<0.095	<0.236	<4.7	<10	NA		
SB-15	36.483902	-107.465268	3/10/2014	34.0		55	290	24	250	619	9,000	1,100	NA		Saturated Soil / Capillary Fringe
				40.0		<0.047	<0.047	<0.047	<0.095	<0.0236	6.7	<10	NA		
SB-16	36.484177	-107.465299	12/11/2017	25-30'	2850	0.71	25	4.4	57	87.1	1,500	350	<46	1,850	
				47-50'	1,601	11	51	7.5	75	144.5	3,000	68	<49	3,068	Saturated Soil / Capillary Fringe
SB-17	36.484082	-107.465003	12/11/2017	0-5'	1.9	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.7	<48	<62.4	
				40-45'	0.2	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<9.1	<45	<58.8	
SB-18	36.48387	-107.464899	12/14/2017	13-15'	0	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.5	<48	<62.4	
				38-40'	0	<0.023	<0.046	<0.046	<0.091	<0.206	<4.6	<9.9	<50	<64.5	
SB-19	36.483756	-107.46512	12/15/2017	23-25'	1.2	<0.024	<0.049	<0.049	<0.097	<0.219	<4.9	<9.5	<48	<62.5	
				43-45'	0	<0.024	<0.048	<0.048	<0.095	<0.215	<4.8	<9.6	<48	<62.4	
SB-20	36.483907	-107.465707	12/11/2017	35-40'	2,269	<0.024	<0.047	<0.047	<0.095	<0.213	9.6	<9.1	<46	9.5	
				40-45'	558	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	<9.5	<47	<61.2	
SB-21	36.483488	-107.465888	12/14/2017	33-35'	2,038	2.5	30	5.0	48	85.5	2,400	55	<47	2,455	Saturated Soil / Capillary Fringe
				43-45'	346	<0.023	<0.047	<0.047	0.13	0.13	<4.7	<10	<50	<64.7	
SB-22	36.483625	-107.465633	12/15/2017	28-30'	1,425	0.51	<0.48	1.0	7.9	9.41	1,200	42	<47	1,242	Saturated Soil / Capillary Fringe
				33-35'	24.1	<0.023	<0.047	<0.047	<0.094	<0.211	<4.7	<9.4	<47	<61.1	
SB-23	36.483448	-107.465472	12/14/2017	18-20'	4.1	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.3	<47	<61.2	
				43-45'	0	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<10	<50	<65.0	
BH-01			4/19/2018	45'	1718	0.29	8.1	1.8	23	33.19	360	87	<46	447	Saturated Soil / Capillary Fringe
				49'	217	<0.023	<0.046	<0.046	<0.093	0.0	<4.6	<9.0	<45	<58.6	
BH-02			4/24/2018	65'	0.3	<0.024	<0.048	<0.048	<0.097	0.0	<4.8	<9.5	<47	<61.3	
MW-01	36.4841567	-107.4653257	4/19/2018	25'	1931	<0.23	2.2	1.9	25	29.1	530	650	58	1238	Saturated Soil / Capillary Fringe
				65	165.0	<0.024	<0.048	<0.048	<0.096	0.0	<4.8	<9.2	<46	<60	
MW-02	36.4837333	-107.4652058	4/23/2018	55'	16.1	<0.024	<0.048	<0.048	<0.097	0.0	<4.8	<7.8	<39	<51.6	
MW-03	36.4833673	-107.4651518	4/25/2018	40'	1.4	<0.025	<0.049	<0.049	<0.098	0.0	<4.9	<9.5	<47	<61.4	

Table 2
LOWERY TANK BATTERY
SOIL ANALYTICAL RESULTS
WILLIAMS FOUR CORNERS LLC

ANALYTICAL PARAMETERS						VOLATILES					TPH				Comments
Sample ID	Latitude	Longitude	Sampling Date	Depth	PID (ppmV)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH Total (mg/kg)	
Action Level						10				50				100	
MW-04	36.4834180	-107.4659332	4/17/2018	35'	1669	0.35	1.3	0.23	2.4	4.3	**110**	<9.0	<45	**110**	Saturated Soil / Capillary Fringe
				55'	6.1	<0..023	<0.046	<0.046	<0.092	0.0	<4.6	<9.8	<49	<63.4	
MW-05	36.4834012	-107.4654950	4/18/2018	40'	50.2	<0..023	<0.046	<0.046	<0.092	0.0	<4.6	<9.7	<49	<63.3	
				55'	12.1	<0..023	<0.046	<0.046	<0.093	0.0	<4.6	<8.9	<44	<57.5	
MW-06	36.4833855	-107.4662855	4/16/2018	45'	149	<0..023	<0.047	<0.047	<0.093	0.0	<4.7	<9.1	<45	<58.8	
				55'	2.6	0.033	0.050	<0.049	<0.097	0.05	<4.9	<9.2	<46	<60.1	
MW-07	36.4831826	-107.4659171	4/18/2018	45'	1469	<0.024	<0.047	<0.047	<0.094	0.0	<4.7	<9.9	<49	<63.6	
				55'	3.1	<0.024	<0.048	<0.048	<0.096	0.0	<4.8	<9.3	<47	<61.1	
MW-08	36.4830998	-107.4655286	4/25/2018	45'	1.6	<0.024	<0.049	<0.049	<0.098	0.0	<4.9	<9.6	<48	<62.5	
				55'	1,108	<0.024	<0.048	<0.048	<0.095	0.0	<4.8	<9.3	<47	<61.1	
MW-09	36.4829553	-107.4662874	4/24/2018	55'		<0.024	<0.047	<0.047	<0.095	0.0	<4.7	<9.3	<47	<61	
MW-10	36.4838679	-107.4648573	4/26/2018	50'	0.3	<0.024	<0.048	<0.048	<0.096	0.0	<4.8	<8.5	<43	<56.3	

85.5 Concentrations in bold and yellow exceed the applicable regulatory limit

2013 data collected by Apex for SSI

2014 data collected by Apex for SSI

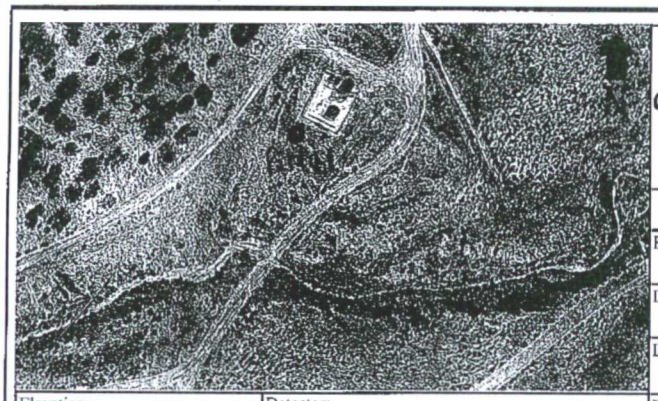
2017 data collected by LTE

2018 data collected by LTE

Table 3
LOWERY TANK BATTERY
GROUNDWATER DATA
WILLIAMS FOUR CORNERS, LLC

ANALYTICAL PARAMETERS					VOLATILES			
Sample ID	Latitude	Longitude	Media	Sampling Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
MW-01	36.4841567	-107.4653257	Groundwater	4/26/2018	5,300	7,100	510	4100
MW-02	36.4837333	-107.4652058	Groundwater	4/24/2018	600	9,000	450	4800
MW-03	36.4833673	-107.4651518	Groundwater	4/26/2018	<1	<1	<1	<1.5
MW-04	36.483418	-107.4659332	Groundwater	4/18/2018	2,800	110	180	1600
MW-05	36.4834012	-107.465495	Groundwater	4/20/2018	1,200	3,500	150	1700
MW-06	36.4833855	-107.4662855	Groundwater	4/18/2018	3.9	<1	<1	<1.5
MW-07	36.4831826	-107.4659171	Groundwater	4/20/2018	5,700	3,900	250	2,400
MW-08	36.4830998	-107.4655286	Groundwater	4/26/2018	600	13,000	580	5600
MW-09	36.4829553	-107.4662874	Groundwater	4/26/2018	1,200	7,800	520	5400
MW-10	36.4838679	-107.4648573	Groundwater	4/26/2018	<1	<1	<1	<1.5

Appendix A



LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH01		Project: Lowery Tank Battery	
Date: 4-19-18		Project Number: 034018010	
Logged By: D. Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation: ~6440'	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand		Seal: Bentonite	Grout: Bentonite
Casing Type: Schedule 40 PVC		Diameter: 2" Length: NONE	Hole Diameter: 8" Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: NONE	Total Depth: 49' Depth to Water: NONE

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					
					1					
3										
2	Moist	0.3	No		2			SW-SM	Brown, med. + med. coarse well gr. sand w/ silt. No stain/odor	No well set.
3					3					
3	sl. moist	0.2	No		4			SW-SM	Lt. Brown med. sand w/ silt. No s/o	
4					5					
					6					
					7					
					8					
5		3.9								
5	Dry		No		9			SW	Lt. Brown/tan med + fn-med sand. Well graded. No stain/odor.	
5					10					
					11					
					12					
					13					
7										
10	Dry	2.8	No		14			SW	SAA. Tan, well gr. med. sand. No stain/odor	
10										
					15					

Advancing Opportunity

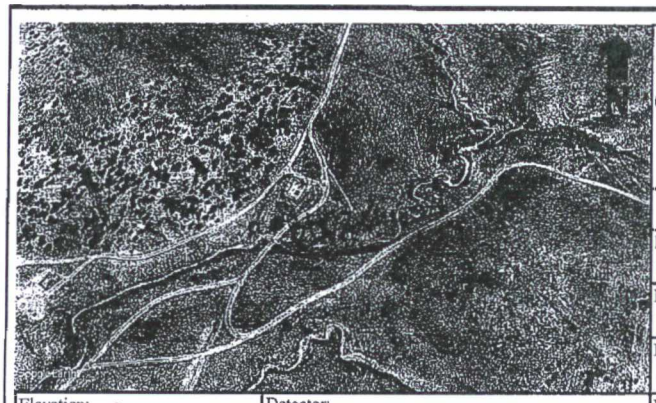
Boring/Well #	BH01
Project:	Lowery Tank Battery
Project #	034018010
Date	4-19-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
7 4 6	V. sl. moist.	3.4	No		15–20			SW-SM	Lt. Brown med fn, sand w/ silt, well graded. Some tr. of white mottle + oxidation. No stain/odor	No well set.
7 11 14	V. sl moist	8.9	No		21–25			SM/ML	Brown + H. gray V. fn silty sand Some silt w/ sand. Blocky structure w/ some tr. coal + white/gray/ black mottling. No stain/odor.	
50/6"	Dry	15.6	No		26–30			SP-SM	Lt. gray w/ faint reddish hue. V. fn sand. w/ silt. No stain but moderate, damp, trash-like degraded odor.	
14 33 42	Dry	354	No odor Yes		31–35			ML	Gray. Silt, some V. fn. Sand. Platy, non-cohesive/plastic No stain, moderate odor. Degrad. HC.	
					36–37					

Advancing Opportunity

Boring/Well #	BH 01
Project:	Lowery Tank Battery
Project #	034018010
Date	4-19-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
					38					
22			No		39					No
50/6"	dry	1,629	odor		40			ML	Lt gray silt w/ v.fn. sand. Platy, non-cohesive/plast. No stain, strong HC/old gassy odor.	well
			yes		41					
					42					set.
					43					
					44				v. silty. Lt. gray/tan fn. sand.	
50/6"	Dry	1,718	No odor yes	BH01 @45' (11:20)	45			SM	Poorly graded, some cementation. Small streaks of dark gray & oxidation. No stain, strong HC odor.	
					46					
					47					
					48				Auger + Sampler refusal @49'	
50/4"	Dry	217	No odor yes	BH01 @49' (11:30)	49			SM	Lt gray/tan fn. silty sand. Cemented. Oxidized. No stain/slight odor. Backfill with clean material.	
					50					
					51					
					52					
					53					
					54					
					55					
					56					
					57					
					58					
					59					



LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: BH02 ~~MW03~~		Project: Lowery Tank Battery	
Date: 4-23-18 / 4-24		Project Number: 034018010	
Logged By: D. Burns		Drilled By: Enviro Drill	
Elevation: ~6,440	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand		Seal: —	Grout: —
Casing Type: Schedule 40 PVC		Diameter: 2" Length: —	Hole Diameter: 8" / Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: —	Total Depth: 65' / Depth to Water: NONE

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					No well set.
					1					
					2					
					3					
8										
10	Dry	0.0	No		4			SW-SM	Brown med. well graded sand w/ silt. No stain/odor.	
10					5			SP	Tan med. poorly graded sand No stain/odor	
					6					
					7					
					8					
8										
5	Dry	0.1	No		9			SW-SM	Tan med fn-med well graded sand w/ silt. No stain/odor	
5					10					
					11					
					12					
					13					
7										
8	Dry	0.0	No		14			SP-SM	Tan fn-med fn poorly graded sand w/ silt. No stain/odor	
11					15					

Advancing Opportunity

Boring/Well #	MW05 / BH02
Project:	Lowery TB
Project #	034018010
Date	4-24-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15					
					16					
					17					
					18					
9										
10	Dry	0.3	No		19			SM	Lt. Brown / tan fn. med fn. silty sand. No s/o.	No well set.
14					20					
					21					
					22					
					23					
12										
14	Dry	DB 2.3	No		24			SM	Brown, fn-med fn silty sand. Dense, compact, white mottling, some oxidation. No stain/odor	
15					25					
					26					
					27					
					28					
					29					
50/3"	Dry	0.0	No		30			SP	Dark Brown fn.-med sand, partial cementation. No stain/odor.	
					31					
					32					
					33					
14										
20	Dry	2.5	No		34			SP SM	Light brownish gray fn-med fn sand w/ silt. No stain/odor.	
32					35					
					36					
					37					

LTE Advancing Opportunity

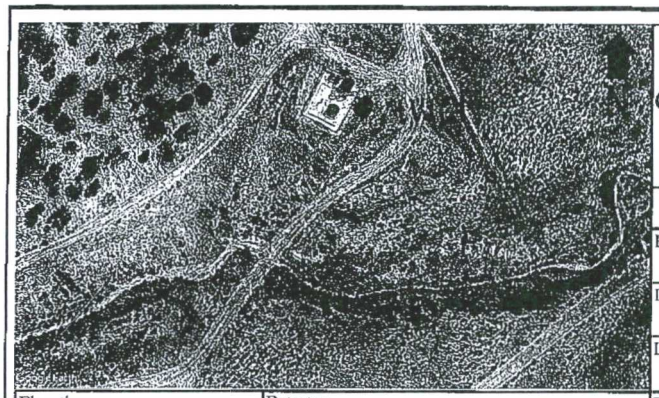
Boring/Well #	~~MW03~~ BH02
Project:	Lowery TB
Project #	0340 18010
Date	4-24-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
					38					
17					39					
35	Dry	1.7	No					ML	Light gray w/ some multi color maroon & olive silt & fn. sandy silt. ## No stain/odor.	
50/3"					40					No well set.
					41					
					42					
					43					
					44					
50/3"	Dry	1.0	No		45			SP-SM	Maroon/light gray fn-med sand w/ silt. Slight cementation. No stain/odor.	
					46					
					47					
					48				Slough was same as above. No stain/odor, Dry	
	No Recovery				49					
50/0					50		No		No recovery in split spoon or shoe. Hard material. 50 hits for 0" recovery. spoon was dry.	
					51					
					52					
					53					
					54					
50/1"	Dry	5.6	No		55			ML	Lt. gray fn. sand silt stone, slightly cemented. Dense. No stain/odor.	
					56					
					57					
					58					
					59			SP-SM	Lt. gray fn.-med fn sand w/ silt No stain/odor.	
50/2"	Dry	1.0	No		60					

Advancing Opportunity

Boring/Well #	BH02
Project:	Lowery Tank Battery
Project #	034018010
Date	4-24-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					58					
					59			SP-SM	Lt-gray fn-med. fn sand w/ silt. No stain/odor.	
50/2"	Dry	1.0	No		60		X			No well set
					61					
					62					
					63				gray fn. sandy siltstone fissile/ laminated, cemented. No stain/odor.	
				BH02 @65' (11:00)	64					
50/5"	Dry	0.3	No		65		X			
					66				- No GW encountered in boring. No soil impact (stain/odor PID >100ppm) observed.	
					67					
					68				- Backfill w/ clean material.	
					69					
					70					
					71					
					72					
					73					
					74					
					75					
					76					
					77					
					78					
					79					



LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW 01		Project: Lowery Tank Battery	
Date: 4-19-18		Project Number: 034018010	
Logged By: Danny Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation:	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 65-38'		Seal: Bentonite 38-36'	Grout: Bentonite/cement slurry 36'-0'
Casing Type: Schedule 40 PVC	Diameter: 2" Length:	Hole Diameter: 8"	Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 2" Length: 20'	Total Depth: 65'	Depth to Water: ~47

well set @ 60'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Flush Mount
2 2 2	moist	0.4	No		0–2			Fill	Dark brown, loose unconsolidated silty sand. Likely fill material No stain/odor	
2 2 5	moist	3.7	No		4–5			SP	D. brown, poorly sorted fn-med sand, tr. silt. No stain/odor.	
					8			SP	SAA, No s/o	
2 3 3	Moist	1.2	No		9–10			SM	D. Brown silty fn. sand. No s/o	
2 2 2	Moist	2.4	No		14–15			SP	Brown med. sand poor graded No stain/odor	

Advancing Opportunity

Boring/Well #	MW01
Project:	Lowery Tank Battery
Project #	034018010
Date	4-19-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
7 10 10	Dry	1,473	No odor yes		15 16 17 18 19 20			SP	Lt. Brown fn-med sand, Poor gr. No stain, moderate to strong degraded gassy odor.	
8 10 12	8 Dry	1,931	No odor yes	MW 01 @ 25' (13:00)	21 22 23 24 25			SP SM	SAA. No stain, strong odor. Dark Brown silty med. sand w/ white mottle → oxidation. Dense. strong odor. gassy.	
7 10 17	Dry	1,652	No odor yes		26 27 28 29 30			SP	Lt. Brown fn-med sand. tr. silt. Some oxid. No stain, strong HC gas odor.	
4 10 10	Dry	1,344	No odor yes		31 32 33 34 35			SP	Lt. grayish brown fn-med sand w/ lots of oxidation No stain, v. strong HC odor. Xylene odor.	
					36 37					

Advancing Opportunity

Boring/Well #	MW01
Project:	Lowery Tank Battery
Project #	034018010
Date	4-19-18

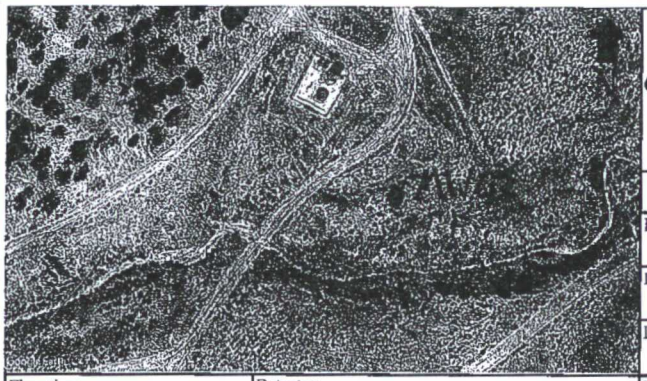
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
10					38					
13	Dry	1246	No odor		39			SP.	Lt. grayish brown med fn. Sand. With silt. poorly gr.	
11			yes		40			SM	some oxidation. No stain, mod. degraded HC gas odor.	
					41					
					42					
					43					
5	moist	1429	Yes		44			SM	Dark gray silty med - fn-med sand. Moderate to strong HC stain and odor.	
5					45			ML	Dark gray fine sandy silt. w/ little white mottling & oxidation. Platy. Mod. to strong HC stain/odor.	
7									GW	
					46					
					47					
					48					
34	sl. moist				49			ML	SAA. Dark gray fn. sandy silt. Mod s/o	
15		1327	yes		50			SP	Lt. gray fn sand. Mod. stain/odor.	
11					51					
					52					
					53				Wet above.	
					54					
50/2"	moist dry	not enough for sample	No		55			SP	Lt gray med. fn sand, partially cemented. V. slight odor. Not enough for sample.	
					56					
					57					
					58					
50/2"	dry	353	No sl. odor		59			SP	SAA. Lt gray med fn. sand stn. slight odor. No stain	
					60					

Advancing Opportunity

Boring/Well #	MW01
Project:	Lowery Tank Battery
Project #	034018010
Date	4-19-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					60			SP	Lt gray med. fn. sand stn. slight odor. No stain.	
					61					
					62					
					63					
50/3"	DRY	165	No	MW01 @65' (14:45)	64				Lt. gray med. fn sand stn. slight odor. No stain	
					65		X	SP		
					66				TD-65' set @ 60' w/ 20' screen	Backfill with Sand to 60'
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					31					
					32					
					33					
					34					
					35					
					36					
					37					

Flush mount well completion due to proximity of BGT load lines.



LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW02		Project: Lowery Tank Battery	
Date: 4-23-18		Project Number: 034018010	
Logged By: Danny Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation: ~6,440'	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 55-33'		Seal: Bentonite 33-31'	Grout: Bentonite/cement slurry 31-0'
Casing Type: Schedule 40 PVC		Diameter: 2" Length: ~40'	Hole Diameter: 8" Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 20'	Total Depth: 55' Depth to Water: ~40-45

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
4 6 5	Dry	0.0	No		0 1 2 3 4 5		X	SP	Light brown/tan fn-med sand, poorly graded. No stain/odor.
6 9 11	Dry	0.0	No		6 7 8 9 10		X	SM	Lt. Brown v. fn-fn silty sand. Non-plastic/cohesive. No stain/odor
7 7 9	Dry	0.0	No		11 12 13 14 15		X	SM	SAA. No stain/odor.

~3' stick up Well Completion

Advancing Opportunity

Boring/Well #	MW02
Project:	Lowery Tank Battery
Project #	034018010
Date	4-23-18

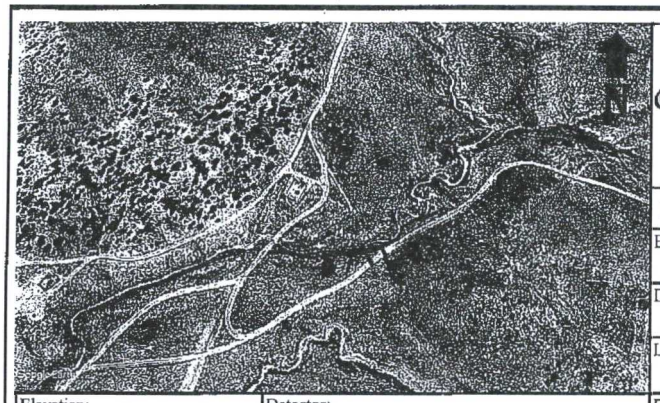
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks
11 19 29	Dry	0.0	No		15 16 17 18 19 20			ML	Lt. Brown fn. sandy silt. White mottling. No stain/odor.
9 13 22	Dry	0.0	No		21 22 23 24 25			ML	Dark brown fn. sandy silt. Some mottling & oxidation. Dense, compact. No stain/odor
13 18 24	Dry	0.0	No		26 27 28 29 30			ML	Brown fn - med fn sandy silt. White mottling, oxidation and trace coal. No stain/odor
8 11 17	Dry	2.1	No		31 32 33 34 35			ML	SAA. fn-med sandy silt. white mottle, oxid. No stain/odor.
					36 37				

Well Completion

Advancing Opportunity

Boring/Well #	MW02
Project:	Lowery Tank Battery
Project #	034018010
Date	4-23-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
8 8 5	Sl. Moist	14.2	Sl?		38 39 40			SM	Brown to lt. gray med-fn. silty sand. Possible stain, slight. No odor.	
					41 42 43				GW	
7 7 9	wet	1,429	yes		44 45			SW-SM	Gray med fn-med. well graded sand with silt. Moderate stain + HC odor.	
					46 47					
5 8 11	Sl. moist	142	No		48 49 50			ML	Dark brown and grayish brown fn-med sandy silt. W/ lots of oxidation and white mottling No stain, slight residual odor	
					51 52					
12 24 50/5"	Wet/ moist	16.1	No	MW 02 @55' (13:00)	53 54 55			SW-SM	Lt brown/grayish tan well graded med. sand w/ silt Some oxidation. No stain/odor.	
					56 57 58 59				Well set @ 55' 20' screen	



Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW03		Project: Lowery Tank Battery	
Date: 4-25-18		Project Number: 034018010	
Logged By: D. Burns		Drilled By: Enviro Drill	
Elevation: ~6,440'	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 55-36'		Seal: Bentonite 36-34'	Grout: Bentonite/cement slurry 34-0'
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 45'	Hole Diameter: 8" Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 10'	Total Depth: 50' Depth to Water: ~46-47

well set @48'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	~3' Stickup Well Completion
3 2 4	Dry	0.0	No		0 1 2 3 4 5		X	SP SM	Lt. Brown med-fn. poorly graded Sand w/ silt. Loam, some organic material. No stain/odor.	
8 11 12	Dry	0.0	No		6 7 8 9 10		X	SM	Brown fn. silty sand. Poorly graded. Dense. No stain/odor.	
10 12 12	Dry	0.0	No		11 12 13 14 15		X	SM	Brown med-fn silty sand. P. graded. Dense. No stain/odor	

Advancing Opportunity

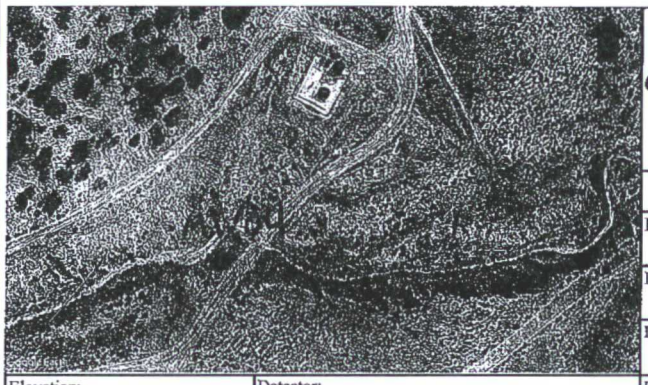
Boring/Well #	MW03
Project:	Lowery TB
Project #	034018010
Date	4-25-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
9 14 17	Dry	0.0	No		15–20		X	SP SM	Lt Brown fn - med fn silty sand. No stain/odor poorly graded.	
14 18 19	Dry	0.0	No		21–25		X	SW- SM	Lt. Brown/tan med. well graded sand w/ silt. Some. Oxidation. No stain/odor	
14 16 20	Dry	0.0	No		26–30		X	ML SP- SM	Lt. Brown ~~silty~~ med fn sandy silt w/ white mottling. No stain/odor. Lt. Brown med. fn. silty sand w/ some cemented oxidation + mottling. No stain/odor.	
9 12 18	Dry	0.0	No		31–35		X	SW	Lt. grayish tan and orangish brown med fn. + med sand w/ some silt. Oxidation. Loose well graded. No stain/odor	
					36–37					

Advancing Opportunity

Boring/Well #	MW03
Project:	Lowery TB
Project #	034018010
Date	4-25-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
					38					
6	SL. Moist	1.4	No	MW03 @ 40' (10:00)	39			SW	Lt. orangish brown med fn-med sand, trace silt. Oxidation. Slight moist. No stain/odor.	
7					40					
7					41					
					42					
					43					
4					44				Brown / Lt. Brown w/ some OX. Med. well graded sand. Wet. No stain/odor.	
5	wet	0.2	No		45			SW		GW
5					46					
					47					
					48			SW - SM	Lt. gray/tan. w/ oxid. well graded med fn sand w/ silt. No stain/odor. wet.	
4	wet				49			ML	Gray fn-med fn. sandy silt. Dense. moist. Mottle/oxid. No stain/odor.	
6	Moist	0.4	No		50			SW	Lt. orangish brown med. well gr. sand. Oxid. No s/o. wet.	
6	wet				51					
					52				well set @ 48' w/ 10' screen.	
					53					
					54					
					55					
					56					
					57					
					58					
					59					



Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW04		Project: Lowery Tank Battery	
Date: 4-17-18		Project Number: 034018010	
Logged By: Danny Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation: 6440	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 55-31'		Seal: Bentonite 31-29'	Grout: 29-0' Bentonite-cement slurry
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 40'	Hole Diameter: 8" Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 20'	Total Depth: 55' Depth to Water: ~43'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					set @ 53' 3' stick up.
					1				Brown fn-med. sand w/ silt & organic material Loam. well graded	
					2					
					3					
4					4		X	SW	No stain/odor	
4	Dry	0.0	No							
5					5		X	SM		
					6					
					7					
					8					
4										
12					9		X	SW-SM	Brown med. sand w/ silt well graded. Into some slightly cemented fine medium sand w/ silt and gravel w/ oxidation. No stain or odor.	
12	Dry	0.0	No							
12					10		X	SM		
					11					
					12					
					13					
								SM	Brown med. silty sand. mottled. No stain/odor.	
8	Dry	0.0	No		14		X			
9										
14					15		X	ML	Darker brown silt w/ sand. Med. loose No s/o	

Advancing Opportunity

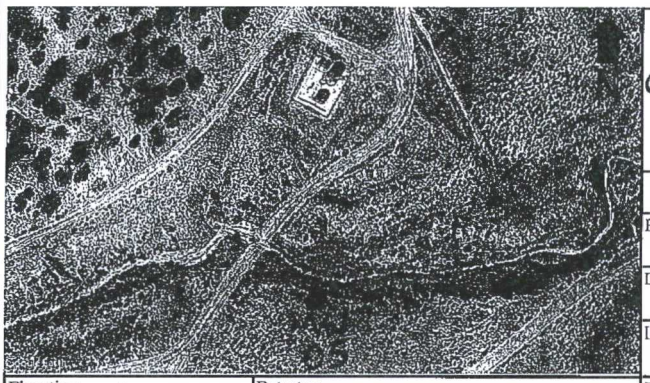
Boring/Well #	MW04
Project:	Lowery Tank Battery
Project #	034018010
Date	4-17-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15					
					16					
					17					
					18					
6					19			ML	Dark Brown silt w/ sand, some white mottle. Non-plastic/cohesive	
14	Dry	0.0	No						Platy structure No stain/odor	
14					20					
					21					
					22					
					23					
9					24			ML	Same as above, some lighter areas w/ increased mottles and some oxidation. No stain/odor	
16	Dry	0.0	No							
17					25					
					26					
					27					
					28			ML	same as above	
6	Dry		No		29			SP	Med. to Fn. tan sand. Poorly graded. Slight moist. No stain/odor.	
7	slightly moist	0.0	No							
8					30					
					31					
					32					
					33					
3				MW 04 @35' (11:00)						
5	Sl. moist	1,669	Yes		34				Dark gray fn. sandy silt w/ moderate stain/odor of hydrocarbons. Slightly moist	
8					35			ML		
					36					
					37					

Advancing Opportunity

Boring/Well #	MW04
Project:	Lowery Tank Battery
Project #	034018010
Date	4-17-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
					38					
7					39			ML	Dark gray silt, trace fn. sand. Moderate stain/odor.	
7	Sl. moist	784	yes						Non-cohesive/plastic. some mottling.	
4					40					
					41					
					42					
					43					
3	sl moist	153	slight		44			ML	Brown w/ some gray silt, trace fn sand slight stain/odor.	
7										
7	wet	43.7	yes		45			SP-SM	Dark gray, fn-med sand, some silt, heavy stain/slight odor. Wet.	
					46					
					47					
					48					
					49					
50/5"	wet	21.2	slight		50			SP	Lt. gray, ~~well~~ poor graded med. sand. slight stain/odor.	
					51					
					52					
					53					
				MW 04, @55' (12:00)	54					
50/4"	Dry	6.1	~~slight~~ NO		55			SM/ML	Lt. gray v. fn silty sand. and silt w/ fn. sand. Some slight cementation and laminar bedding.	
					56					
					57					
					58					
					59					



Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW05		Project: Lowery Tank Battery	
Date: 4-18-18		Project Number: 034018010	
Logged By: Danny Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation: ~6,440	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 55-33'		Seal: Bentonite 33-31'	Grout: 31-0' Bentonite cement slurry
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 40'	Hole Diameter: 8" Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 20'	Total Depth: 55' Depth to Water: ~40-43'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	~3' stickup Well Completion
					0					
					1					
					2			SW-SM		
					3				Brown fn-med sand w/silt organics, loam. No stain or odor. Well graded	
3 4 4	Dry	0.0	No		4					
					5					
					6					
					7					
					8					
6 7 8	Dry	0.0	No		9			SW-SM	Brown & tan med-med coarse sand w/ silt. Some sl. cement. w/ oxidation. No stain/odor	
					10					
					11					
					12					
					13			SW-SM	SAA. No stain/odor	
9					14					
13 15	Dry	0.0	No		15			SW	Tan med-med. coarse sand well graded. No stain/odor	

Advancing Opportunity

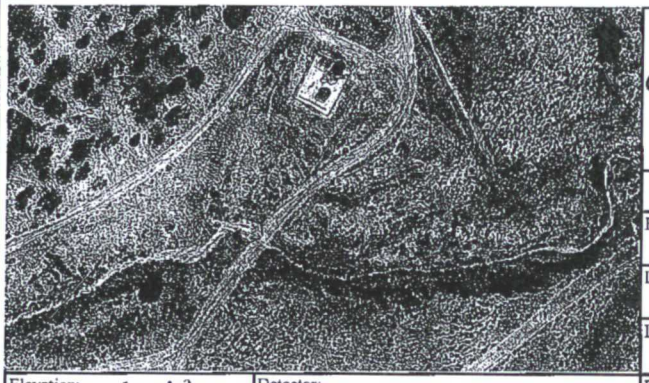
Boring/Well #	MW05
Project:	Lowery Tank Battery
Project #	034018010
Date	4-18-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
11 10 13	Dry	0.0	No		15 16 17 18 19 20			SM ML	Brown silty sand & sandy silt. Some white mottling. Non-plastic/cohesive. No stain/odor	
10 10 11	Dry	0.0	No		21 22 23 24 25			ML SP-SM	Dark brown silt w/ sand. Some white mottle. No stain/odor Non-plastic/cohesive Tan v. fn-fn. sand w/ silt. Poorly graded. No stain/odor.	
6 7 8	Dry	0.0	No		26 27 28 29 30			SP-SM ML SP-SM	SAA. Brown fn. sand. w/ silt P. graded No stain/odor Dark brown silt w/ fn. sand. No s/o white mottle. 4" thick SAA. Brown fn sand w/ slt no s/o	
7 7 8	Damp	0.0	No		31 32 33 34 35			SW.	Tan. med fn - med. sand. well graded. Oxidation. No stain/odor.	
					36 37					

Advancing Opportunity

Boring/Well #	MW05
Project:	Lowery Tank Battery
Project #	034018010
Date	4-18-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
6 8 8	V. moist / wet in shoe	50.2	yes	MW05 @ 40' (13:30)	38 39 40			SM	Lt. gray & brownish gray silty fn-med sand. Non-cohesive. Slight stain/odor. No sheen. odor is slightly more organic than hydrocarbon. Or degraded HC	
					41 42 43					GW
6 4 4	wet	1,742	yes		44 45			SP	Dark gray. med. fn. sand poorly graded. Strong staining and HC odor. No sheen.	
					46 47 48					
6 6 9	SL. moist	17.2	No		49 50			ML	Dark brown fn. sandy silt. w/ some platy structure & white/gray mottle & oxidation. No stain/odor.	
					51 52 53					
4/5" 4/0	wet	12.1	No	MW05 @ 55' (14:00)	54 55			SM	Tan fn-med & med-coarse silty sand. No stain or odor. No sheen	
					56 57 58 59					



Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW06		Project: Lowery Tank Battery	
Date: 4-16-18		Project Number: 034018010	
Logged By: D. Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation: ~6440	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 65'-39'		Seal: Bentonite 39'-37'	Grout: Bentonite cement slurry 37'-0'
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 45'	Hole Diameter: 8" Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 15'	Total Depth: 65' set at 56' Depth to Water: ~52'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	~3' stickup Well Completion
					0					
					1				Brown Fn-med. sand w/ silt. +organics. Loam. well graded	
1	Dry	0.0	No		2			SW-	No stain/odor	
2										
2					3			SM		
1					4				Lt. Brown med. sand, trace silt.	
2	Dry	0.0	No						No stain/odor	
4					5					
					6					
					7					
					8					
6									Lt. Brown silty fn.-med.	
5	Dry	0.0	No		9			SM	sand. No stain/odor.	
9					10					
					11					
					12					
					13					
18								SM	SAA. No s/o.	
18	Dry	0.0	No		14				Brown, sandy silt w/ gravel.	
19					15			ML		

Advancing Opportunity

Boring/Well #	MW06
Project:	Lowery Tank Battery
Project #	034018010
Date	4-16-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15			ML	Brown, sandy silt w/ gravel	
					16					
					17					
					18					
11 20 22	Dry	0.0	No		19 20			ML	SAA Darker brown, sandy silty dense. Dry. some compaction. No stain/odor	
					21					
					22					
					23			SW-	Lt. Brown, med. sand, trace silt. Slightly damp. No stain/odor.	
8 8 10	Silty. Damp	0.5	No		24 25			SM	Loose	
					26					
					27					
					28					
7 9 12	Moist	0.1	No		29 30			SP- SM	Brown. fn. - med. fn. silty sand. some lenses of sandy silt, slightly plastic. No stain/odor	
					31					
					32					
					33					
5 10 17	Dry	0.0	No		34 35			SM ML	SAA. No stain/odor Multicolored, gray, violet, olive, tan silt. Medium Dense. Non-cohesive, non-plastic, blocky structure. No stain/odor	
					36					
					37					

Advancing Opportunity

Boring/Well #	MW06
Project:	Lowery Tank Battery
Project #	034018010
Date	4-16-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
					38					
					39					
50/4"	Dry	0.0	No		40			SW	Lt. grayish, red fn-med. sand. Becoming compacted/cemented. into Lt. gray fn.-med. weathered sandstone. No stain/odor.	
					41					
					42					
					43					
			No/ sl. odor	MW 06 @45' (15:00)	44				some slough.	
17 50/4"	Dry	149			45			SW-SM ML	Lt. gray/red fn. med sand with multicolored ~~sand~~ Medium. Dense Not sandy silt. cemented. No staining, minor odor.	
					46					
					47					
					48					
					49					
50/4"	Dry	3.0	No		50			SW-SM	Lt. gray fn-med. sandstone, tr. silt. No stain. Med. dense, cemented. for odor.	
					51					
					52					
					53					GW
				MW 06, @55' (15:30)	54					
50/4"	Dry/ sl. moist	2.6	No		55			SP	SAA, w/ 1" lense of med. coarse p-graded sand, slthy moist. No stain/odor.	
					56					
					57					
					58				SAA. lt. gray fn-med. sandstn. tr. silt. No stain/odor.	
	Dry	1.2	No		59					
50/4"								SP		
50/4"	Dry	1.0	No		60 65			SP	SAA. S.stn. No s/o. Dry	

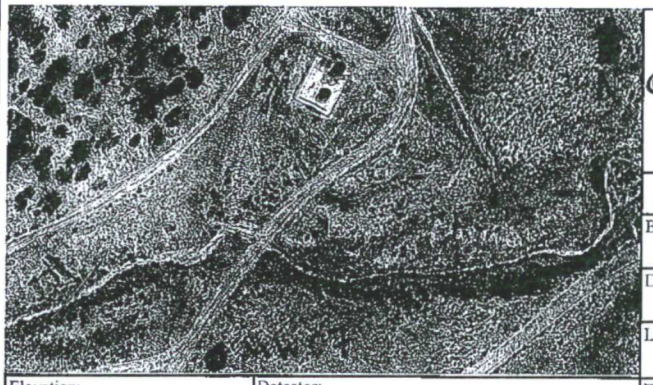
Advancing Opportunity

Boring/Well #	MW06
Project:	Lowery Tank Battery
Project #	034018010
Date	4-16-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					55			SP		
					56					
					57					
					58					
					59				Lt gray. fn-med. Sand stn. tr. silt. No stain/odor	
50/4"	Dry	1.2	No		60		X	SP		
					61					
					62					
					63					
					64				SAA. Lt. gray fine to med. s. stn. No stain/odor.	
50/4"	Dry	1.0	No		65		X	SP		
					66					
					67					
					68					
					69					
					70					
					71					
					72					
					73					
					74					
					75					
					76					
					77					

TD 65'
Well set @ 56'
15' screen
w/ some sand pack to see if GW infiltrates overnight.

4/17 - Approx 4' of GW in well. Completed as usual.



Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW07		Project: Lowery Tank Battery	
Date: 4-17-18		Project Number: 034018010	
Logged By: Danny Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation: ~ 6,440'	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 55'-38'		Seal: Bentonite 38'-36'	Grout: 36'-0' Bentonite-cement slurry
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 45'	Hole Diameter: 8" Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 15'	Total Depth: 55' Depth to Water: ~45'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					~3' stick up
					1					
					2					
					3					
4					4			SW	Brown fn-med sand w/ silt Loam w/ organics, well graded	
5	Dry	0.0	No							
6					5			SM	No stain/odor. Dry	
					6					
					7					
					8					
5										
6					9				Lt. Brown fn. silty sand.	
7	Dry	0.0	No					SM	No stain/odor. Dry	
					10					
					11					
					12					
					13					
6										
6	Dry	0.0	No		14			SP-SM	Lt. Brownish tan. v. fn. sand. trace silt. No stain/odor. Poorly graded.	
9					15					

Advancing Opportunity

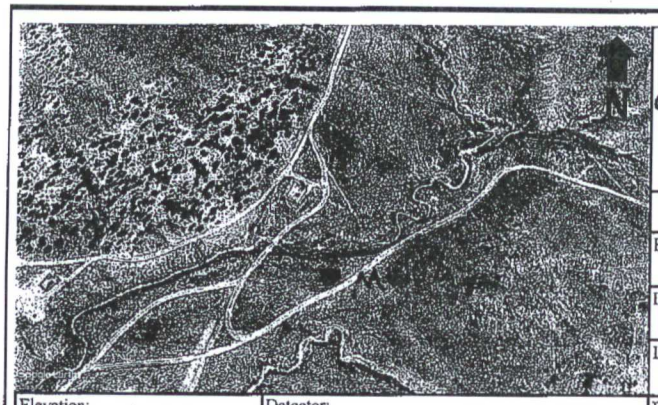
Boring/Well #	MW07
Project:	Lowery Tank Battery
Project #	034018010
Date	4-17-18 / 4-18-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15					
					16					
					17					
					18					
6					19				Brown + tan medium to coarse sand w/ gravel lense. 6"	
13	Dry	0.0	No					SW	No stain/odor. Some oxidation	
12					20					
					21					
					22					
					23					
8					24				SAA. Brown/tan med-coarse sand. No stain/ odor.	
9	Dry	0.0	No					SW		
13					25					
					26					
					27					
					28					
12					29				Tan med. sand. No stain/odor	
12	Dry	0.0	No					SW	2" lense of slightly cemented s.stn. w/ oxidation. ___ End of 4/17/18	
10					30					
					31					
					32				Begin 4/18/18	
					33					
10					34				SAA. Tan, med - med fn sand some small cemented oxidation.	
5	Dry	0.0	No					SW	No stain/odor.	
6					35					
					36					
					37					

Advancing Opportunity

Boring/Well #	MW07
Project:	Lowery Tank Battery
Project #	034018010
Date	4-17-18 / 4-18-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
7 7 8	Dry	0.0	No		38 39 40			SW	Tan, medium sand. Well graded No stain/odor	
					41 42					
11 7 7	Wet	1,469	yes	MW 07 @45' (09:30)	43 44 45			SW	Dark gray med sand, well graded. Moderate stain, heavy odor. No sheen. GW	
					46 47 48					
7 9 10	Sl. Moist	5.4	No		49 50			ML	Dark brown silt, dense, non-plastic or cohesive, some mottle (white to gray) and oxidation spots. No stain/odor.	
					51 52 53					
9 17 17	Wet	3.1	No	MW 07 @55' (09:45)	54 55			SM	Tan, orangish brown fn-med. silty sand, well graded. No stain or odor. No sheen.	
					56 57 58 59				Set well @55' 15' screen.	



LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW08		Project: Lowery Tank Battery	
Date: 4-25-18		Project Number: 034018010	
Logged By: D. Burns		Drilled By: Enviro Drill	
Elevation: ~6,440	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 55'-38'		Seal: Bentonite 38'-36'	Grout: Bentonite cement 36'-0' slurry
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 45	Hole Diameter: 8" Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 15'	Total Depth: 55' Depth to Water: ~50'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					~3' stickup
					1					
					2					
6					3					
8								SP.	Brown med-fn to fn. sand	
7	Dry	0.0	No		4			SM	w/ silt. Organics.	
					5		X		No stain/odor	
					6					
					7					
7					8					
6									Tan, med. well graded	
5	Dry	0.0	No		9		X	SW	sand. No stain/odor.	
					10					
					11					
					12					
					13					
4								SW	SAA. No stain/odor	
7	Dry	0.0	No		14		X	SP	Tan, med-fn, poorly graded	
8					15				sand. Tr. silt. No stain/odor.	

Advancing Opportunity

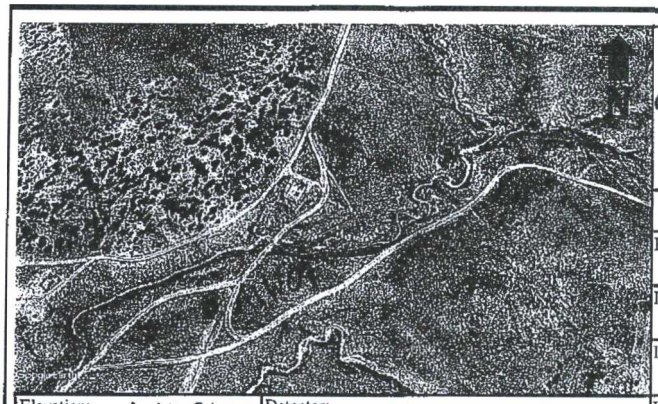
Boring/Well #	MW08
Project:	Lowery TB
Project #	034018010
Date	4-25-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
7 7 8	Dry	0.0	No		15–20			SW	Lt. Brown/tan medium/med-fn sand, tr. silt, well graded. No stain/odor	
8 8 11	Dry	0.0	No		21–25			SW	SAA. Lt. Brown med. sand. well graded. No stain/odor.	
9 12 11	Dry	0.0	No		26–30			SW	SAA. Brown med. well graded sand. Trace silt. No stain/odor.	
8 7 10	V. Slight moist	0.0	No		31–35			SW-SM	Brown med-fn ~~[illegible]~~ well graded sand w/ silt. some oxidation. No stain or odor.	
					36–37					

Advancing Opportunity

Boring/Well #	MW08
Project:	Lowery TB
Project #	034018010
Date	4-25-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
					38					
4	SL.				39				Lt. orangish brown w/ oxidation. med - med. fn	
5	Moist	1.9	No					SW	sand. Trace silt. No stain	
8					40				or odor. slight moist.	
					41					
					42					
					43					
3				MW 08 @45' (12:45)						
6	moist	1.6	No		44			SW	Brown med. well graded sand.	
7					45				Trace silt. with oxidation Moist. No stain/odor.	
					46					
					47					
					48					
3										
4	Wet	1,108	8"		49			SW	Brown med - medcoarse well graded sand. w/ oxidation. No s/o	GW
11			yes		50				Gray med-coarse w.gr. sand Moderate stain/odor. 8" thick in sample spoon. No sheen.	
					51					
					52					
					53					
4	wet		No	MW 08 @55' (13:00)				SW	grayish brown med. well graded sand. No stain, slight odor. wet.	
7					54					
11	sl. moist	10.8	No		55			ML	Dark grayish brown silt w/ fn. sand, some coal + oxidation seams/pockets. Low plasticity, slighty moist. No stain, no odor, seems highly impermeable.	
					56					
					57				Set well @ 55'	
					58				15' screen.	
					59					



LTE Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW09		Project: Lowery Tank Battery	
Date: 4-24-18		Project Number: 034018010	
Logged By: D. Burns		Drilled By: Enviro Drill	
Elevation: ~6440'	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 55-33'		Seal: Bentonite 33'-31'	Grout: Bentonite cement slurry 31-0'
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 40'	Hole Diameter: 8" Depth to Liquid:
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 20'	Total Depth: 55' Depth to Water: 245-47'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					~3' stickup
					1					
					2					
					3					
13					4				Brown, dense, compact fn-med. fn silty sand. No stain/odor	
13	Dry	0.0	No		5			SM		
13										
					6					
					7					
					8					
6					9				Lt. Brown med. fn. poorly graded sand. No stain/odor	
6	Dry	0.0	No					SP		
7					10					
					11					
					12					
					13					
5									SAA	
7	Dry	0.0	No		14			SP	Lt-Brown med fn-med P. graded sand. No stain/odor.	
9					15					

Advancing Opportunity

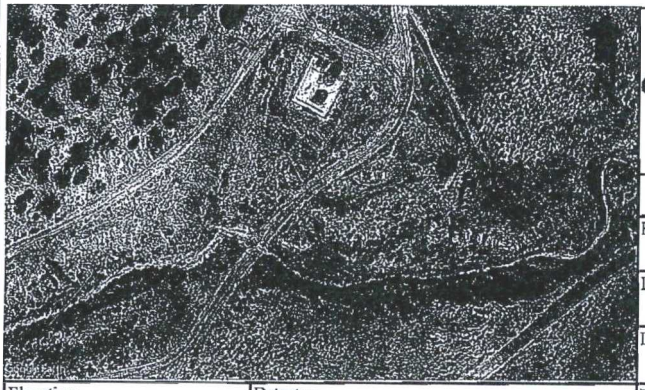
Boring/Well #	MW09
Project:	Lowery TB
Project #	03401840
Date	4-24-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15			SP		
					16					
					17					
					18					
9					19				Tan, well graded medium sand.	
8	Dry	0.0	No					SW	Tr. silt. Some oxidation.	
10					20				No stain/odor.	
					21					
					22					
					23					
7									SAA	
8	Dry	0.0	No		24			SW	No stain/odor.	
8					25			SP-SM	Lt. Brown poorly graded medium fn. sand w/ silt. No stain/odor.	
					26					
					27					
					28					
14					29			SM	Brown silty med. sand w/ mottle + oxidation. No s/o	
15	Dry	0.0	No							
22					30			ML	Dark Brown med sandy silt. white + black mottle + oxidation No stain/odor.	
					31					
					32					
					33					
9										
18					34			ML	SAA - Dk Brown med fn sandy silt w/ mottling. No s/o. + oxid.	
17	Dry	0.0	No					SP-SM	Lt grayish brown + oxidized fn-med fn sand w/ silt. No stain/odor.	
					35					
					36					
					37					

Advancing Opportunity

Boring/Well #	MW09
Project:	Lowery TB
Project #	0340180 10
Date	4-24-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
6 7 8	Sl. Moist	0.5	No		38 39 40			SW-SM	Reddish brown med. well grad. sand w/ some silt. Sl. moist. No stain/odor.	
					41 42 43					
5 6 7	wet	1,475	yes		44 45			SW	Brownish gray to dark gray well graded med. Sand. Moderate stain/odor. GW	
					46 47 48					
6/6"	sl. moist	8.2	No		49 50			ML	Lt grayish/dark brown silt w/ tr. fnd. sand. No stain/odor. V. dense.	
					51 52 53					
5 5 8	V. moist/wet		No	MW 09 @55' (14.00)	54 55			SM	Lt. Brown/tan fn-med fn silty sand. well graded. Some oxidation. No stain/odor.	
					56 57 58 59				Well set @ 55' 20' screen	



Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW10		Project: Lowery Tank Battery	
Date: 4-25-18		Project Number: 034018010	
Logged By: Danny Burns ~~Eric Carroll~~		Drilled By: Enviro-Drill	
Elevation: ~6440	Detector: PID	Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand 50-36'		Seal: Bentonite 36'-34'	Grout: Bentonite/cement slurry 34-0'
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 45'	Hole Diameter: 8" Depth to Liquid: —
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 2" Length: 10'	Total Depth: 50 Depth to Water: ~46

well set @ 48'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
3 4 6	Dry	0.0	No		0–5		X	SP	Lt. Brown/tan med. fn sand, poorly graded w/ organics. No stain/odor.	stickup
10 13 13	Dry	0.0	No		5–10		X	SM	Brown fn. silty sand. Dense. Non-plastic/cohesive. No stain/odor.	
5 7 9	Dry	0.0	No		10–15		X	SW	Tan fn-med. fn well graded sand. No stain/odor, Tr. silt.	

Advancing Opportunity

Boring/Well #	MW10
Project:	Lowery Tank Battery
Project #	034018010
Date	4-25-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					15					
					16					
					17					
					18					
16					19			ML	Lt. Brown fn. sandy silt. White mottling. Dense. No stain/odor.	
25	Dry	0.0	No							
34					20			SM	Lt. Brown fn-med fn. silty sand. Dense, some cementation. No stain/odor.	
					21					
					22					
					23			ML	Brown fn-sandy silt. Mottle, platy structure, dense. No stain/odor.	
14										
17	Dry	0.0	No		24					
17					25			SW	orangish brown med. well graded sand. No stain/odor.	
					26					
					27					
					28					
8										
14	Dry	0.0	No		29			SW-SM	Brown + orangish brown med to med. fn. silty sand. well graded w/ lense of oxidized silt. No stain/odor.	
16					30					
					31					
					32					
					33			ML	Dark grayish brown silt w/ fn. sand white/gray to black mottling, oxidation veins. No stain/odor.	
10	V.									
13	Sl.	0.0	No		34					
18	moist							SW-SM	Lt. orangish brown med. fn. silty sand. oxidation. well graded. No stain/odor.	
					35					
					36					
					37					

Advancing Opportunity

Boring/Well #	MW10
Project:	Lowery Tank Battery
Project #	034018010
Date	9-25-18

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					37					
5 8 9	SL. Moist.	0.0	No		38 39 40			ML	Dark grayish brown silt, w/ fn. sand. Maroon & black mottling Trace coals w/ oxidation sand lenses. No stain/odor.	
					41 42					
3 3 5	Moist	2.2	No	MW 10 @45' (10:30)	43 44 45			SW ML SW	Lt. brown med. well graded sand. tr. silt. Oxidized. No stain/odor 6" lens of Dark grayish brown, silt mottled, tr. coal. No stain/odor. Brown med. well graded sand. No stain/odor.	
	wet in shoe				46 47					
3 4 7	moist SL. moist.	0.3	No		48 49 50			SW -SM	Brown med. fn silty sand. well graded No stain/odor. 49' Dark grayish brown silt w/ sand. Mottling, oxidation. Dense No stain/odor. Low plasticity	
					51 52 53 54 55 56 57 58 59				Set well @ 48' 10' screen.	

Appendix B

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 26, 2018

Danny Burns
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Lowery TB OrderNo.: 1804B43

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 12 sample(s) on 4/21/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-001 **Matrix:** SOIL

Client Sample ID: MW01 @ 25'
Collection Date: 4/19/2018 1:00:00 PM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	650	9.6		mg/Kg	1	4/25/2018 11:19:05 AM	37772
Motor Oil Range Organics (MRO)	58	48		mg/Kg	1	4/25/2018 11:19:05 AM	37772
Surr: DNOP	97.1	70-130		%Rec	1	4/25/2018 11:19:05 AM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	530	46		mg/Kg	10	4/24/2018 11:43:04 PM	37754
Surr: BFB	473	15-316	S	%Rec	10	4/24/2018 11:43:04 PM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.23		mg/Kg	10	4/24/2018 11:43:04 PM	37754
Toluene	2.2	0.46		mg/Kg	10	4/24/2018 11:43:04 PM	37754
Ethylbenzene	1.9	0.46		mg/Kg	10	4/24/2018 11:43:04 PM	37754
Xylenes, Total	25	0.92		mg/Kg	10	4/24/2018 11:43:04 PM	37754
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	10	4/24/2018 11:43:04 PM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-002 **Matrix:** SOIL

Client Sample ID: MW01 @ 65'
Collection Date: 4/19/2018 3:00:00 PM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/25/2018 11:42:48 AM	37772
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/25/2018 11:42:48 AM	37772
Surr: DNOP	84.8	70-130		%Rec	1	4/25/2018 11:42:48 AM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/25/2018 12:06:28 AM	37754
Surr: BFB	92.6	15-316		%Rec	1	4/25/2018 12:06:28 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/25/2018 12:06:28 AM	37754
Toluene	ND	0.048		mg/Kg	1	4/25/2018 12:06:28 AM	37754
Ethylbenzene	ND	0.048		mg/Kg	1	4/25/2018 12:06:28 AM	37754
Xylenes, Total	ND	0.096		mg/Kg	1	4/25/2018 12:06:28 AM	37754
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	4/25/2018 12:06:28 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-003 **Matrix:** SOIL

Client Sample ID: BH01 @ 45'
Collection Date: 4/19/2018 11:20:00 AM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	87	9.2		mg/Kg	1	4/25/2018 12:06:23 PM	37772
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/25/2018 12:06:23 PM	37772
Surr: DNOP	87.6	70-130		%Rec	1	4/25/2018 12:06:23 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	360	47		mg/Kg	10	4/25/2018 12:29:56 AM	37754
Surr: BFB	158	15-316		%Rec	10	4/25/2018 12:29:56 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.29	0.24		mg/Kg	10	4/25/2018 12:29:56 AM	37754
Toluene	8.1	0.47		mg/Kg	10	4/25/2018 12:29:56 AM	37754
Ethylbenzene	1.8	0.47		mg/Kg	10	4/25/2018 12:29:56 AM	37754
Xylenes, Total	23	0.95		mg/Kg	10	4/25/2018 12:29:56 AM	37754
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	10	4/25/2018 12:29:56 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-004 **Matrix:** SOIL

Client Sample ID: BH01 @ 49'
Collection Date: 4/19/2018 11:30:00 AM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/25/2018 12:30:03 PM	37772
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/25/2018 12:30:03 PM	37772
Surr: DNOP	81.7	70-130		%Rec	1	4/25/2018 12:30:03 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/25/2018 12:53:22 AM	37754
Surr: BFB	87.0	15-316		%Rec	1	4/25/2018 12:53:22 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/25/2018 12:53:22 AM	37754
Toluene	ND	0.046		mg/Kg	1	4/25/2018 12:53:22 AM	37754
Ethylbenzene	ND	0.046		mg/Kg	1	4/25/2018 12:53:22 AM	37754
Xylenes, Total	ND	0.093		mg/Kg	1	4/25/2018 12:53:22 AM	37754
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	4/25/2018 12:53:22 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-005 **Matrix:** SOIL

Client Sample ID: MW04 @ 35'
Collection Date: 4/17/2018 11:00:00 AM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/25/2018 12:53:47 PM	37772
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/25/2018 12:53:47 PM	37772
Surr: DNOP	91.1	70-130		%Rec	1	4/25/2018 12:53:47 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	110	4.8		mg/Kg	1	4/25/2018 1:16:46 AM	37754
Surr: BFB	224	15-316		%Rec	1	4/25/2018 1:16:46 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.35	0.024		mg/Kg	1	4/25/2018 1:16:46 AM	37754
Toluene	1.3	0.048		mg/Kg	1	4/25/2018 1:16:46 AM	37754
Ethylbenzene	0.23	0.048		mg/Kg	1	4/25/2018 1:16:46 AM	37754
Xylenes, Total	2.4	0.096		mg/Kg	1	4/25/2018 1:16:46 AM	37754
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	4/25/2018 1:16:46 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-006 **Matrix:** SOIL

Client Sample ID: MW04 @ 55'
Collection Date: 4/17/2018 12:00:00 PM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/25/2018 1:17:39 PM	37772
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/25/2018 1:17:39 PM	37772
Surr: DNOP	85.7	70-130		%Rec	1	4/25/2018 1:17:39 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/25/2018 1:40:07 AM	37754
Surr: BFB	86.9	15-316		%Rec	1	4/25/2018 1:40:07 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/25/2018 1:40:07 AM	37754
Toluene	ND	0.046		mg/Kg	1	4/25/2018 1:40:07 AM	37754
Ethylbenzene	ND	0.046		mg/Kg	1	4/25/2018 1:40:07 AM	37754
Xylenes, Total	ND	0.092		mg/Kg	1	4/25/2018 1:40:07 AM	37754
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/25/2018 1:40:07 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-007 **Matrix:** SOIL

Client Sample ID: MW05 @ 40'
Collection Date: 4/18/2018 1:30:00 PM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/25/2018 1:41:13 PM	37772
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/25/2018 1:41:13 PM	37772
Surr: DNOP	102	70-130		%Rec	1	4/25/2018 1:41:13 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/25/2018 2:03:33 AM	37754
Surr: BFB	88.7	15-316		%Rec	1	4/25/2018 2:03:33 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/25/2018 2:03:33 AM	37754
Toluene	ND	0.046		mg/Kg	1	4/25/2018 2:03:33 AM	37754
Ethylbenzene	ND	0.046		mg/Kg	1	4/25/2018 2:03:33 AM	37754
Xylenes, Total	ND	0.092		mg/Kg	1	4/25/2018 2:03:33 AM	37754
Surr: 4-Bromofluorobenzene	98.9	80-120		%Rec	1	4/25/2018 2:03:33 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-008 **Matrix:** SOIL

Client Sample ID: MW05 @ 55'
Collection Date: 4/18/2018 2:00:00 PM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	4/25/2018 2:04:54 PM	37772
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	4/25/2018 2:04:54 PM	37772
Surr: DNOP	91.2	70-130		%Rec	1	4/25/2018 2:04:54 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/25/2018 2:26:56 AM	37754
Surr: BFB	87.1	15-316		%Rec	1	4/25/2018 2:26:56 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/25/2018 2:26:56 AM	37754
Toluene	ND	0.046		mg/Kg	1	4/25/2018 2:26:56 AM	37754
Ethylbenzene	ND	0.046		mg/Kg	1	4/25/2018 2:26:56 AM	37754
Xylenes, Total	ND	0.093		mg/Kg	1	4/25/2018 2:26:56 AM	37754
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	4/25/2018 2:26:56 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-009 **Matrix:** SOIL

Client Sample ID: MW06 @ 45'
Collection Date: 4/16/2018 3:00:00 PM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/25/2018 2:28:36 PM	37772
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/25/2018 2:28:36 PM	37772
Surr: DNOP	84.0	70-130		%Rec	1	4/25/2018 2:28:36 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/25/2018 2:50:16 AM	37754
Surr: BFB	87.5	15-316		%Rec	1	4/25/2018 2:50:16 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/25/2018 2:50:16 AM	37754
Toluene	ND	0.047		mg/Kg	1	4/25/2018 2:50:16 AM	37754
Ethylbenzene	ND	0.047		mg/Kg	1	4/25/2018 2:50:16 AM	37754
Xylenes, Total	ND	0.093		mg/Kg	1	4/25/2018 2:50:16 AM	37754
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	4/25/2018 2:50:16 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-010 **Matrix:** SOIL

Client Sample ID: MW06 @ 55'
Collection Date: 4/16/2018 3:30:00 PM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/25/2018 2:52:22 PM	37772
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/25/2018 2:52:22 PM	37772
Surr: DNOP	77.3	70-130		%Rec	1	4/25/2018 2:52:22 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/25/2018 11:14:05 AM	37754
Surr: BFB	86.4	15-316		%Rec	1	4/25/2018 11:14:05 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.033	0.024		mg/Kg	1	4/25/2018 11:14:05 AM	37754
Toluene	0.050	0.049		mg/Kg	1	4/25/2018 11:14:05 AM	37754
Ethylbenzene	ND	0.049		mg/Kg	1	4/25/2018 11:14:05 AM	37754
Xylenes, Total	ND	0.097		mg/Kg	1	4/25/2018 11:14:05 AM	37754
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	4/25/2018 11:14:05 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-011 **Matrix:** SOIL

Client Sample ID: MW07 @ 40'
Collection Date: 4/18/2018 9:15:00 AM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/25/2018 3:16:02 PM	37772
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/25/2018 3:16:02 PM	37772
Surr: DNOP	85.6	70-130		%Rec	1	4/25/2018 3:16:02 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/25/2018 11:37:23 AM	37754
Surr: BFB	89.5	15-316		%Rec	1	4/25/2018 11:37:23 AM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/25/2018 11:37:23 AM	37754
Toluene	ND	0.047		mg/Kg	1	4/25/2018 11:37:23 AM	37754
Ethylbenzene	ND	0.047		mg/Kg	1	4/25/2018 11:37:23 AM	37754
Xylenes, Total	ND	0.094		mg/Kg	1	4/25/2018 11:37:23 AM	37754
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/25/2018 11:37:23 AM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B43-012 **Matrix:** SOIL

Client Sample ID: MW07 @ 55'
Collection Date: 4/18/2018 9:45:00 AM
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/25/2018 3:39:51 PM	37772
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/25/2018 3:39:51 PM	37772
Surr: DNOP	84.5	70-130		%Rec	1	4/25/2018 3:39:51 PM	37772
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/25/2018 12:00:47 PM	37754
Surr: BFB	91.5	15-316		%Rec	1	4/25/2018 12:00:47 PM	37754
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	4/25/2018 12:00:47 PM	37754
Toluene	ND	0.048		mg/Kg	1	4/25/2018 12:00:47 PM	37754
Ethylbenzene	ND	0.048		mg/Kg	1	4/25/2018 12:00:47 PM	37754
Xylenes, Total	ND	0.096		mg/Kg	1	4/25/2018 12:00:47 PM	37754
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	4/25/2018 12:00:47 PM	37754

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804B43**

26-Apr-18

Client: Williams Four Corners

Project: Lowery TB

Sample ID **LCS-37745**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37745**	RunNo: **50794**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648086** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		82.3	70	130			

Sample ID **MB-37745**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37745**	RunNo: **50794**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648087** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		89.6	70	130			

Sample ID **LCS-37772**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37772**	RunNo: **50794**
Prep Date: **4/24/2018**	Analysis Date: **4/25/2018**	SeqNo: **1649793** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	93.0	70	130			
Surr: DNOP	4.1		5.000		82.1	70	130			

Sample ID **MB-37772**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37772**	RunNo: **50794**
Prep Date: **4/24/2018**	Analysis Date: **4/25/2018**	SeqNo: **1649794** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		93.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804B43**

26-Apr-18

Client: Williams Four Corners
Project: Lowery TB

Sample ID **MB-37754**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **37754**	RunNo: **50797**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648246** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.0	15	316			

Sample ID **LCS-37754**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **37754**	RunNo: **50797**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648247** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	75.9	131			
Surr: BFB	950		1000		95.1	15	316			

Sample ID **MB-37764**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **37764**	RunNo: **50836**
Prep Date: **4/24/2018**	Analysis Date: **4/25/2018**	SeqNo: **1649696** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		88.2	15	316			

Sample ID **LCS-37764**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **37764**	RunNo: **50836**
Prep Date: **4/24/2018**	Analysis Date: **4/25/2018**	SeqNo: **1649697** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	15	316			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804B43**

26-Apr-18

Client: Williams Four Corners
Project: Lowery TB

Sample ID **MB-37754**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **37754**	RunNo: **50797**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648281** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	80	120			

Sample ID **LCS-37754**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **37754**	RunNo: **50797**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648282** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.9	77.3	128			
Toluene	0.94	0.050	1.000	0	94.0	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	96.8	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID **1804B43-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW01 @ 65'**	Batch ID: **37754**	RunNo: **50797**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648286** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	0.9891	0.008662	97.6	68.5	133			
Toluene	1.0	0.049	0.9891	0.01039	103	75	130			
Ethylbenzene	1.0	0.049	0.9891	0.01020	104	79.4	128			
Xylenes, Total	3.2	0.099	2.967	0.02868	107	77.3	131			
Surr: 4-Bromofluorobenzene	1.0		0.9891		102	80	120			

Sample ID **1804B43-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **MW01 @ 65'**	Batch ID: **37754**	RunNo: **50797**
Prep Date: **4/23/2018**	Analysis Date: **4/24/2018**	SeqNo: **1648287** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9443	0.008662	105	68.5	133	2.20	20	
Toluene	1.1	0.047	0.9443	0.01039	111	75	130	3.45	20	
Ethylbenzene	1.1	0.047	0.9443	0.01020	113	79.4	128	3.39	20	
Xylenes, Total	3.3	0.094	2.833	0.02868	115	77.3	131	2.99	20	
Surr: 4-Bromofluorobenzene	0.96		0.9443		102	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804B43**

26-Apr-18

Client: Williams Four Corners

Project: Lowery TB

Sample ID	**MB-37764**	SampType:	**MBLK**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID:	**37764**		RunNo:	**50836**				
Prep Date:	**4/24/2018**	Analysis Date:	**4/25/2018**		SeqNo:	**1649726**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.98		1.000		98.2	80	120			

Sample ID	**LCS-37764**	SampType:	**LCS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID:	**37764**		RunNo:	**50836**				
Prep Date:	**4/24/2018**	Analysis Date:	**4/25/2018**		SeqNo:	**1649727**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1804B43 RcptNo: 1

Received By: Isaiah Ortiz 4/21/2018 9:40:00 AM IG

Completed By: Ashley Gallegos 4/23/2018 10:02:49 AM AG

Reviewed By: JMO 4/23/18 Labeled by: ENM

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____
ENM 4/23/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners

Mailing Address: 17755 Arroyo Dr Bloomfield NM

Phone #:

email or Fax#: aaron.gaker@williams.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Lowery TB

Project #:

Project Manager: LTE-Danny Burns

Sampler: D. Burns

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804883	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
4/19	1300	S	MW01@25'	1-4oz	cool	-001	X		X													
4/19	1500		MW01@65'			-002																
4/19	1120		BH01@45'			-003																
4/19	1130		BH01@49'			-004																
4/17	1100		MW04@35'			-005																
4/17	1200		MW04@55'			-006																
4/18	1330		MW05@40'			-007																
4/18	1400		MW05@55'			-008																
4/16	1500		MW06@45'			-009																
4/16	1530		MW06@55'			-010																
4/18	0915		MW07@40'			-011																
4/18	0945		MW07@55'			-012																

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/20/18	16:50			4/20/18	1650
4/20/18	1846			4/21/18	940

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 03, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Lowery TB OrderNo.: 1804E31

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/28/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E31-001 **Matrix:** SOIL

Client Sample ID: MW02 @ 55'
Collection Date: 4/23/2018 1:00:00 PM
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/1/2018 4:38:10 PM	37844
Surr: BFB	116	70-130		%Rec	1	5/1/2018 4:38:10 PM	37844
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	7.8		mg/Kg	1	5/2/2018 7:20:30 PM	37891
Motor Oil Range Organics (MRO)	ND	39		mg/Kg	1	5/2/2018 7:20:30 PM	37891
Surr: DNOP	121	70-130		%Rec	1	5/2/2018 7:20:30 PM	37891
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/1/2018 4:38:10 PM	37844
Toluene	ND	0.048		mg/Kg	1	5/1/2018 4:38:10 PM	37844
Ethylbenzene	ND	0.048		mg/Kg	1	5/1/2018 4:38:10 PM	37844
Xylenes, Total	ND	0.097		mg/Kg	1	5/1/2018 4:38:10 PM	37844
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	5/1/2018 4:38:10 PM	37844
Surr: Toluene-d8	89.1	70-130		%Rec	1	5/1/2018 4:38:10 PM	37844

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E31-002 **Matrix:** SOIL

Client Sample ID: BH02 @ 65'
Collection Date: 4/24/2018 11:00:00 AM
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/1/2018 5:01:10 PM	37844
Surr: BFB	117	70-130		%Rec	1	5/1/2018 5:01:10 PM	37844
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/2/2018 7:42:41 PM	37891
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/2/2018 7:42:41 PM	37891
Surr: DNOP	101	70-130		%Rec	1	5/2/2018 7:42:41 PM	37891
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/1/2018 5:01:10 PM	37844
Toluene	ND	0.048		mg/Kg	1	5/1/2018 5:01:10 PM	37844
Ethylbenzene	ND	0.048		mg/Kg	1	5/1/2018 5:01:10 PM	37844
Xylenes, Total	ND	0.096		mg/Kg	1	5/1/2018 5:01:10 PM	37844
Surr: 4-Bromofluorobenzene	128	70-130		%Rec	1	5/1/2018 5:01:10 PM	37844
Surr: Toluene-d8	91.0	70-130		%Rec	1	5/1/2018 5:01:10 PM	37844

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E31-003 **Matrix:** SOIL

Client Sample ID: MW09 @ 55'
Collection Date: 4/24/2018 2:00:00 PM
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/1/2018 5:24:09 PM	37844
Surr: BFB	117	70-130		%Rec	1	5/1/2018 5:24:09 PM	37844
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/2/2018 8:04:39 PM	37891
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/2/2018 8:04:39 PM	37891
Surr: DNOP	111	70-130		%Rec	1	5/2/2018 8:04:39 PM	37891
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/1/2018 5:24:09 PM	37844
Toluene	ND	0.047		mg/Kg	1	5/1/2018 5:24:09 PM	37844
Ethylbenzene	ND	0.047		mg/Kg	1	5/1/2018 5:24:09 PM	37844
Xylenes, Total	ND	0.095		mg/Kg	1	5/1/2018 5:24:09 PM	37844
Surr: 4-Bromofluorobenzene	127	70-130		%Rec	1	5/1/2018 5:24:09 PM	37844
Surr: Toluene-d8	87.8	70-130		%Rec	1	5/1/2018 5:24:09 PM	37844

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E31-004 **Matrix:** SOIL

Client Sample ID: MW03 @ 40'
Collection Date: 4/25/2018 10:00:00 AM
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/1/2018 5:47:15 PM	37844
Surr: BFB	114	70-130		%Rec	1	5/1/2018 5:47:15 PM	37844
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/2/2018 8:26:45 PM	37891
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/2/2018 8:26:45 PM	37891
Surr: DNOP	103	70-130		%Rec	1	5/2/2018 8:26:45 PM	37891
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.025		mg/Kg	1	5/1/2018 5:47:15 PM	37844
Toluene	ND	0.049		mg/Kg	1	5/1/2018 5:47:15 PM	37844
Ethylbenzene	ND	0.049		mg/Kg	1	5/1/2018 5:47:15 PM	37844
Xylenes, Total	ND	0.098		mg/Kg	1	5/1/2018 5:47:15 PM	37844
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	5/1/2018 5:47:15 PM	37844
Surr: Toluene-d8	87.5	70-130		%Rec	1	5/1/2018 5:47:15 PM	37844

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E31-005 **Matrix:** SOIL

Client Sample ID: MW08 @ 45'
Collection Date: 4/25/2018 12:45:00 PM
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/1/2018 6:10:15 PM	37844
Surr: BFB	117	70-130		%Rec	1	5/1/2018 6:10:15 PM	37844
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/2/2018 8:48:42 PM	37891
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/2/2018 8:48:42 PM	37891
Surr: DNOP	106	70-130		%Rec	1	5/2/2018 8:48:42 PM	37891
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/1/2018 6:10:15 PM	37844
Toluene	ND	0.049		mg/Kg	1	5/1/2018 6:10:15 PM	37844
Ethylbenzene	ND	0.049		mg/Kg	1	5/1/2018 6:10:15 PM	37844
Xylenes, Total	ND	0.098		mg/Kg	1	5/1/2018 6:10:15 PM	37844
Surr: 4-Bromofluorobenzene	127	70-130		%Rec	1	5/1/2018 6:10:15 PM	37844
Surr: Toluene-d8	88.0	70-130		%Rec	1	5/1/2018 6:10:15 PM	37844

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E31-006 **Matrix:** SOIL

Client Sample ID: MW08 @ 55'
Collection Date: 4/25/2018 1:00:00 PM
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/1/2018 6:33:24 PM	37844
Surr: BFB	117	70-130		%Rec	1	5/1/2018 6:33:24 PM	37844
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/2/2018 9:10:48 PM	37891
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/2/2018 9:10:48 PM	37891
Surr: DNOP	102	70-130		%Rec	1	5/2/2018 9:10:48 PM	37891
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/1/2018 6:33:24 PM	37844
Toluene	ND	0.048		mg/Kg	1	5/1/2018 6:33:24 PM	37844
Ethylbenzene	ND	0.048		mg/Kg	1	5/1/2018 6:33:24 PM	37844
Xylenes, Total	ND	0.095		mg/Kg	1	5/1/2018 6:33:24 PM	37844
Surr: 4-Bromofluorobenzene	128	70-130		%Rec	1	5/1/2018 6:33:24 PM	37844
Surr: Toluene-d8	88.4	70-130		%Rec	1	5/1/2018 6:33:24 PM	37844

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E31-007 **Matrix:** SOIL

Client Sample ID: MW10 @ 50'
Collection Date: 4/26/2018 10:45:00 AM
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/1/2018 9:38:02 PM	37844
Surr: BFB	116	70-130		%Rec	1	5/1/2018 9:38:02 PM	37844
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	5/2/2018 9:32:47 PM	37891
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	5/2/2018 9:32:47 PM	37891
Surr: DNOP	102	70-130		%Rec	1	5/2/2018 9:32:47 PM	37891
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	5/1/2018 9:38:02 PM	37844
Toluene	ND	0.048		mg/Kg	1	5/1/2018 9:38:02 PM	37844
Ethylbenzene	ND	0.048		mg/Kg	1	5/1/2018 9:38:02 PM	37844
Xylenes, Total	ND	0.096		mg/Kg	1	5/1/2018 9:38:02 PM	37844
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	5/1/2018 9:38:02 PM	37844
Surr: Toluene-d8	89.0	70-130		%Rec	1	5/1/2018 9:38:02 PM	37844

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E31**

03-May-18

Client: Williams Four Corners
Project: Lowery TB

Sample ID **LCS-37898**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37898**	RunNo: **50978**
Prep Date: **5/2/2018**	Analysis Date: **5/2/2018**	SeqNo: **1655172** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.8	70	130			

Sample ID **MB-37898**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37898**	RunNo: **50978**
Prep Date: **5/2/2018**	Analysis Date: **5/2/2018**	SeqNo: **1655173** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8		10.00		98.0	70	130			

Sample ID **LCS-37891**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37891**	RunNo: **50978**
Prep Date: **5/1/2018**	Analysis Date: **5/2/2018**	SeqNo: **1655745** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.9	70	130			
Surr: DNOP	4.8		5.000		96.1	70	130			

Sample ID **MB-37891**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37891**	RunNo: **50978**
Prep Date: **5/1/2018**	Analysis Date: **5/2/2018**	SeqNo: **1655746** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E31**

03-May-18

Client: Williams Four Corners

Project: Lowery TB

Sample ID **lcs-37844**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **37844**	RunNo: **50973**
Prep Date: **4/30/2018**	Analysis Date: **5/1/2018**	SeqNo: **1654841** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.7	80	120			
Toluene	0.95	0.050	1.000	0	95.0	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			
Surr: Toluene-d8	0.46		0.5000		92.2	70	130			

Sample ID **mb-37844**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **37844**	RunNo: **50973**
Prep Date: **4/30/2018**	Analysis Date: **5/1/2018**	SeqNo: **1654842** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.61		0.5000		122	70	130			
Surr: Toluene-d8	0.46		0.5000		92.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E31**

03-May-18

Client: Williams Four Corners
Project: Lowery TB

Sample ID	lcs-37844	SampType:	LCS		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	LCSS	Batch ID:	37844		RunNo:	50973				
Prep Date:	4/30/2018	Analysis Date:	5/1/2018		SeqNo:	1654638	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.2	70	130			
Surr: BFB	500		500.0		99.6	70	130			

Sample ID	mb-37844	SampType:	MBLK		TestCode:	EPA Method 8015D Mod: Gasoline Range				
Client ID:	PBS	Batch ID:	37844		RunNo:	50973				
Prep Date:	4/30/2018	Analysis Date:	5/1/2018		SeqNo:	1654639	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	560		500.0		112	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Enviro tal Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1804E31 RcptNo: 1

Received By: Andy Freeman 4/28/2018 10:40:00 AM

Completed By: Anne Thorne 4/30/2018 11:39:13 AM

Reviewed By: Labeled by AT 04/30/18
ENM 4/30/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners

Mailing Address: 17755 Arroyo Dr
Bloomfield, NM

Phone #:

email or Fax#: Aaron.Galer@Williams.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Lowery TB

Project #:

Project Manager:
Williams - A. Galer
LTE - D. Burns

Sampler: Danny Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804E31	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
4/23	1300	S	MW02@55'	1-4oz.	cool	001	X		X													
4/24	1100		BH02@65'			002	X		X													
4/24	1400		MW09@55'			003	X		X													
4/25	1000		MW03@40'			004	X		X													
4/25	1245		MW08@45'			005	X		X													
4/25	1300		MW08@55'			006	X		X													
4/26	1045	↓	MW10@50'	↓	↓	007	X		X													

Date	Time	Relinquished by:	Received by:	Date	Time
4/27/18	1509				1505
4/27/18	1850			4/28/18	1040

Remarks:
only cc: aager@itenv.com
bherb@itenv.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Analytical Report
Lab Order **1804A28**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: MW04
Project: Lowery TB
Collection Date: 4/18/2018 4:00:00 PM
Lab ID: 1804A28-001
Matrix: AQUEOUS
Received Date: 4/19/2018 7:12:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	2800	100		µg/L	100	4/19/2018 12:28:00 PM	R50700
Toluene	110	10		µg/L	10	4/19/2018 12:52:00 PM	R50700
Ethylbenzene	180	10		µg/L	10	4/19/2018 12:52:00 PM	R50700
Xylenes, Total	1600	15		µg/L	10	4/19/2018 12:52:00 PM	R50700
Surr: 1,2-Dichloroethane-d4	90.7	70-130		%Rec	10	4/19/2018 12:52:00 PM	R50700
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	10	4/19/2018 12:52:00 PM	R50700
Surr: Dibromofluoromethane	92.8	70-130		%Rec	10	4/19/2018 12:52:00 PM	R50700
Surr: Toluene-d8	102	70-130		%Rec	10	4/19/2018 12:52:00 PM	R50700

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804A28**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804A28-002 **Matrix:** AQUEOUS

Client Sample ID: MW06
Collection Date: 4/18/2018 4:40:00 PM
Received Date: 4/19/2018 7:12:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	3.9	1.0		µg/L	1	4/19/2018 1:16:00 PM	R50700
Toluene	ND	1.0		µg/L	1	4/19/2018 1:16:00 PM	R50700
Ethylbenzene	ND	1.0		µg/L	1	4/19/2018 1:16:00 PM	R50700
Xylenes, Total	ND	1.5		µg/L	1	4/19/2018 1:16:00 PM	R50700
Surr: 1,2-Dichloroethane-d4	90.0	70-130		%Rec	1	4/19/2018 1:16:00 PM	R50700
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	4/19/2018 1:16:00 PM	R50700
Surr: Dibromofluoromethane	92.5	70-130		%Rec	1	4/19/2018 1:16:00 PM	R50700
Surr: Toluene-d8	102	70-130		%Rec	1	4/19/2018 1:16:00 PM	R50700

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1804B36**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804B36-001

Client Sample ID: MW05
Collection Date: 4/20/2018 2:00:00 PM
Matrix: GROUNDWA **Received Date:** 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	1200	100		µg/L	100	4/23/2018 1:33:58 PM	R50772
Toluene	3500	100		µg/L	100	4/23/2018 1:33:58 PM	R50772
Ethylbenzene	150	2.0		µg/L	2	4/23/2018 12:34:49 PM	R50772
Xylenes, Total	1700	150		µg/L	100	4/23/2018 1:33:58 PM	R50772
Surr: 1,2-Dichloroethane-d4	119	70-130		%Rec	2	4/23/2018 12:34:49 PM	R50772
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	2	4/23/2018 12:34:49 PM	R50772
Surr: Dibromofluoromethane	95.3	70-130		%Rec	2	4/23/2018 12:34:49 PM	R50772
Surr: Toluene-d8	99.8	70-130		%Rec	2	4/23/2018 12:34:49 PM	R50772

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: MW07
Project: Lowery TB
Collection Date: 4/20/2018 3:00:00 PM
Lab ID: 1804B36-002
Matrix: GROUNDWA
Received Date: 4/21/2018 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	5700	100		µg/L	100	4/23/2018 2:03:14 PM	R50772
Toluene	3900	100		µg/L	100	4/23/2018 2:03:14 PM	R50772
Ethylbenzene	250	100		µg/L	100	4/23/2018 2:03:14 PM	R50772
Xylenes, Total	2400	150		µg/L	100	4/23/2018 2:03:14 PM	R50772
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	2	4/23/2018 1:04:49 PM	R50772
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	2	4/23/2018 1:04:49 PM	R50772
Surr: Dibromofluoromethane	110	70-130		%Rec	2	4/23/2018 1:04:49 PM	R50772
Surr: Toluene-d8	99.4	70-130		%Rec	2	4/23/2018 1:04:49 PM	R50772

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 26, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Lowery TB OrderNo.: 1804C29

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/25/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804C29-001

Client Sample ID: MW02
Collection Date: 4/24/2018 3:45:00 PM
Matrix: GROUNDWA **Received Date:** 4/25/2018 6:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	600	100		µg/L	100	4/25/2018 11:52:29 AM	A50821
Toluene	9000	100		µg/L	100	4/25/2018 11:52:29 AM	A50821
Ethylbenzene	450	100		µg/L	100	4/25/2018 11:52:29 AM	A50821
Xylenes, Total	4800	150		µg/L	100	4/25/2018 11:52:29 AM	A50821
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	100	4/25/2018 11:52:29 AM	A50821
Surr: Toluene-d8	92.1	70-130		%Rec	100	4/25/2018 11:52:29 AM	A50821

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804C29**

26-Apr-18

Client: Williams Four Corners
Project: Lowery TB

Sample ID **100ng lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **A50821**	RunNo: **50821**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649367** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	80	120			
Toluene	21	1.0	20.00	0	103	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	61	1.5	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **A50821**	RunNo: **50821**
Prep Date:	Analysis Date: **4/25/2018**	SeqNo: **1649369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 4-Bromofluorobenzene	12		10.00		119	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Ana. s Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1804C29 RcptNo: 1

Received By: Anne Thorne 4/25/2018 6:40:00 AM Anne Thorne

Completed By: Anne Thorne 4/25/2018 6:45:49 AM Anne Thorne

Reviewed By: AK 04/25/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Williams

Mailing Address: 1775S Arroyo Dr
Bloomfield NM

Phone #:

email or Fax#: aaron.gaier@williams.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) PDF

Turn-Around Time: same
☐ Standard ☒ Rush Day

Project Name: Lowery TB

Project #:

Project Manager: Williams-Aaron Gaier
LTE - Danny Burns

Sampler: D. Burns
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804C29	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX	8270 (Semi-VOA)					Air Bubbles (Y or N)
4-24	1545	GW	MW02	3-40mL	NONE	001										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
4-24-18	1711			4/24/18	1711	
4/24/18	1806			04/25/18	0640	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 08, 2018

Aaron Galer
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Lowery TB OrderNo.: 1804E28

Dear Aaron Galer:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/28/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E28-001

Client Sample ID: MW01
Collection Date: 4/26/2018 4:00:00 PM
Matrix: GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	5300	100		µg/L	100	5/4/2018 4:44:34 PM	C51035
Toluene	7100	100		µg/L	100	5/4/2018 4:44:34 PM	C51035
Ethylbenzene	510	100		µg/L	100	5/4/2018 4:44:34 PM	C51035
Xylenes, Total	4100	150		µg/L	100	5/4/2018 4:44:34 PM	C51035
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	100	5/4/2018 4:44:34 PM	C51035
Surr: Toluene-d8	94.9	70-130		%Rec	100	5/4/2018 4:44:34 PM	C51035

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: MW03
Project: Lowery TB
Collection Date: 4/26/2018 5:00:00 PM
Lab ID: 1804E28-002
Matrix: GROUNDWA
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	5/4/2018 5:07:36 PM	C51035
Toluene	ND	1.0		µg/L	1	5/4/2018 5:07:36 PM	C51035
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 5:07:36 PM	C51035
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 5:07:36 PM	C51035
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	5/4/2018 5:07:36 PM	C51035
Surr: Toluene-d8	94.1	70-130		%Rec	1	5/4/2018 5:07:36 PM	C51035

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: MW08
Project: Lowery TB
Collection Date: 4/26/2018 5:30:00 PM
Lab ID: 1804E28-003
Matrix: GROUNDWA
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	600	50		µg/L	50	5/4/2018 5:53:42 PM	C51035
Toluene	13000	200		µg/L	200	5/4/2018 5:30:36 PM	C51035
Ethylbenzene	580	50		µg/L	50	5/4/2018 5:53:42 PM	C51035
Xylenes, Total	5600	75		µg/L	50	5/4/2018 5:53:42 PM	C51035
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	50	5/4/2018 5:53:42 PM	C51035
Surr: Toluene-d8	99.5	70-130		%Rec	50	5/4/2018 5:53:42 PM	C51035

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: MW09
Project: Lowery TB
Collection Date: 4/26/2018 12:15:00 PM
Lab ID: 1804E28-004
Matrix: GROUNDWA
Received Date: 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	1200	100		µg/L	100	5/4/2018 6:39:41 PM	C51035
Toluene	7800	100		µg/L	100	5/4/2018 6:39:41 PM	C51035
Ethylbenzene	520	100		µg/L	100	5/4/2018 6:39:41 PM	C51035
Xylenes, Total	5400	150		µg/L	100	5/4/2018 6:39:41 PM	C51035
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	100	5/4/2018 6:39:41 PM	C51035
Surr: Toluene-d8	99.6	70-130		%Rec	100	5/4/2018 6:39:41 PM	C51035

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Project: Lowery TB
Lab ID: 1804E28-005

Client Sample ID: MW10
Collection Date: 4/26/2018 4:30:00 PM
Matrix: GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	1.0		µg/L	1	5/4/2018 7:25:49 PM	C51035
Toluene	ND	1.0		µg/L	1	5/4/2018 7:25:49 PM	C51035
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 7:25:49 PM	C51035
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 7:25:49 PM	C51035
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	5/4/2018 7:25:49 PM	C51035
Surr: Toluene-d8	92.1	70-130		%Rec	1	5/4/2018 7:25:49 PM	C51035

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E28**

08-May-18

Client: Williams Four Corners
Project: Lowery TB

Sample ID **100ng lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **C51035**	RunNo: **51035**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1657258** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.4	80	120			
Toluene	20	1.0	20.00	0	99.4	80	120			
Ethylbenzene	20	1.0	20.00	0	102	80	120			
Xylenes, Total	60	1.5	60.00	0	100	80	120			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.3	70	130			
Surr: Toluene-d8	9.5		10.00		95.5	70	130			

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **C51035**	RunNo: **51035**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1657269** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Toluene-d8	9.7		10.00		96.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1804E28 RcptNo: 1

Received By: Andy Freeman 4/28/2018 10:40:00 AM

Completed By: Anne Thorne 4/30/2018 10:51:48 AM

Reviewed By: ENM 4/30/18

Labeled by!

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☑ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑

    # of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

    Adjusted? _____

11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐

    Checked by: _____

14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

    Person Notified: _____ Date _____

    By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

    Regarding: _____

    Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

Chain-of-Custody Record

Client: Williams Four Corners

Mailing Address: 17755 Arroyo Dr
Bloomfield, NM

Phone #:

email or Fax#: Aaron.Galer@williams.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Lowery TB

Project #:

Project Manager:
Williams - A. Galer
LTE - D. Burns

Sampler: Danny Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804E28	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX	8270 (Semi-VOA)	Air Bubbles (Y or N)
4-26	1600	GW	MW01	3-40mL	NONE	001										X		
	1700		MW03			002										X		
	1730		MW08			003										X		
	1215		MW09			004										X		
	1630		MW10			005										X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/26/18	1509		Christie Walters	4/27/18	1509
4/27/18	1850	Christie Walters		4/27/18	0940

Remarks:
cc: aager@henv.com
only bherb@henv.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.